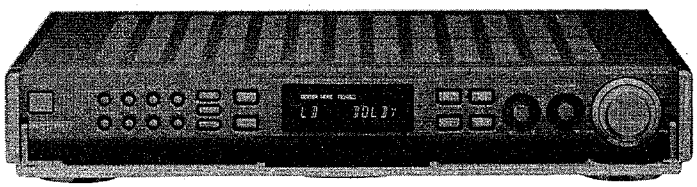
Service Manual

75AV1030 /1B /2B
75AV1040 /1A /2A

AV Surround processor



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marantz®

model AV1030 / AV1040

4822 725 51077
First issue : 1994 / 10
PCS 79 758

MARANTZ DESIGN AND SERVICE

Using superior design and selected high grade components, MARANTZ company has created the ultimate in stereo sound. Only **original MARANTZ parts** can insure that your MARANTZ product will continue to perform to the specifications for which it is famous.

Parts for your MARANTZ equipment are generally available at our National Marantz Subsidiary or Agent.

MARANTZ EUROPE B.V.
P.O. Box 80002
Building SFF 2
5600 JB Eindhoven
The Netherlands
Phone : +31-40-732241
Fax : +31-40-735578

ORDERING PARTS

Parts can be ordered either by mail or by telex. In both cases, the correct part number has to be specified. The following information must be supplied to eliminate delays in processing your order:

1. Complete address
2. Complete part numbers and quantities required
3. Description of parts
4. Model number for which the part is required
5. Way of shipment
6. Signature: any order form or telex must be signed, otherwise such part order will be considered as null and void.

ADDRESSES

AUSTRALIA
MARANTZ AUSTRALIA
Figtree Drive
Australia Centre
Homebush, NSW 2140
AUSTRALIA

AUSTRIA
MARANTZ
Hietzinger Kai 137a
1130 Wien
Austria

BELGIUM
MARANTZ EUROPE B.V.
Div. Benelux
P.O.Box 80002
Building SFF 2
5600 JB Eindhoven
The Netherlands

CHILE
MARANTZ DIVISION OF
PHILIPS S.A.
Av.Santa Maria 0760
Casilla 2687
Santiago
Chile

DENMARK
MARANTZ
Horsvinget 5
2630 Tastrup
Denmark

FINLAND
MARANTZ
Kuortanegatan 1
00520
Helsingfors 52
Finland

FRANCE
MARANTZ FRANCE
4 Rue Bernard Palissy
92600 Asnières
France

GERMANY
MARANTZ GERMANY GmbH
Kleine Heide 12
Postfach 4802
Halle-Westfalen
Germany

GREAT BRITAIN
MARANTZ HiFi UK Ltd.
Kingsbridge House
Padbury Oaks
575-583 Bath Road
Longford Middlesex UB7 OEH,
U.K.

GREECE
ADAMCO ELECTR. SA
P.O.Box 21025
Hippocratus Str. 188
Athens 11471
Greece

ITALY
MARANTZ ITALIANA SPA
Piazza IV Novembre 3
20124 Milano
Italy

JAPAN
MARANTZ JAPAN INC.
35-1, 7-chome, Sagamiono
Sagamihara-shi, Kanagawa
Japan

KUWAIT
AL ALAMIAH ELECTRONICS
P.O.Box 8196
Salmiah
22052 Kuwait

NETHERLANDS
MARANTZ EUROPE B.V.
Div. Benelux
P.O.Box 80002
Building SFF 2
5600 JB Eindhoven
The Netherlands

NORWAY
MARANTZ
Postboks 7034
Assiden
3007 Drammen
Norway

PORTUGAL
COREL
Av. da Liberdade
211-2 Esq.
1200 Lisboa
Portugal

SAUDI ARABIA
AL ALAMIAH ELECTRONICS
P.O.Box 5954
University Street
Riyadh 11432
Saudi Arabia

SOUTH AFRICA
MARANTZ S.A.
10 Bond Street
Randburg 2194
P.O. Box 7703
Johannesburg 2000
South Africa

SPAIN
MARANTZ SPAIN
Martinez Villergas 2
Apartado 2065
Madrid 28027
Spain

SWEDEN
MARANTZ
Box 1324
17125 Solna
Sweden

SWITZERLAND
MARANTZ SWITZERLAND
Postfach
8010 Zürich-Müllingen
Switzerland

TRADING
MARANTZ TRADING
P.O.Box 20008
Building SFF 2
5600 JB Eindhoven
The Netherlands

All of the above locations are fully equipped to take care of your total service needs or can advice you. Because various countries have differing configuration requirements, it is necessary that you contact the service facility in your particular country. In the event that there is no service location listed for your country, please contact the nearest facility for the necessary assistance.

In case of difficulties, do not hesitate to contact the Technical Department at above mentioned address.

1. TECHNICAL SPECIFICATIONS

AMPLIFIER SECTION

Power output	DIN 8Ω	50 W
	RMS 8Ω	45 W
IHF Dynamic power	8Ω	64 W
	4Ω	85 W
	2Ω	92 W
T.H.D. at 8Ω rated RMS output		0.05%
Damping factor		100
Input sensitivity	: LD/TV/VCR1/VCR2/AUDIO IN	220 mV/40 kΩ
S/N (IFH-A)	: LD/TV/VCR1/VCR2/AUDIO IN	80 dB

VIDEO SECTION

Input/Output Level and Impedance 1 Vp-p/75Ω

Power Requirements

/2A/2B version ..... 230 V AC, 50/60 Hz

/1A/1B version ..... 115/230 V AC, 50/60 Hz

Dimensions

Width ..... 422 mm

Height ..... 76 mm

Depth ..... 334 mm

Weight ..... 5.9 kg (AV1030)

6.0 kg (AV1040)

SUPPLIED ACCESSORIES

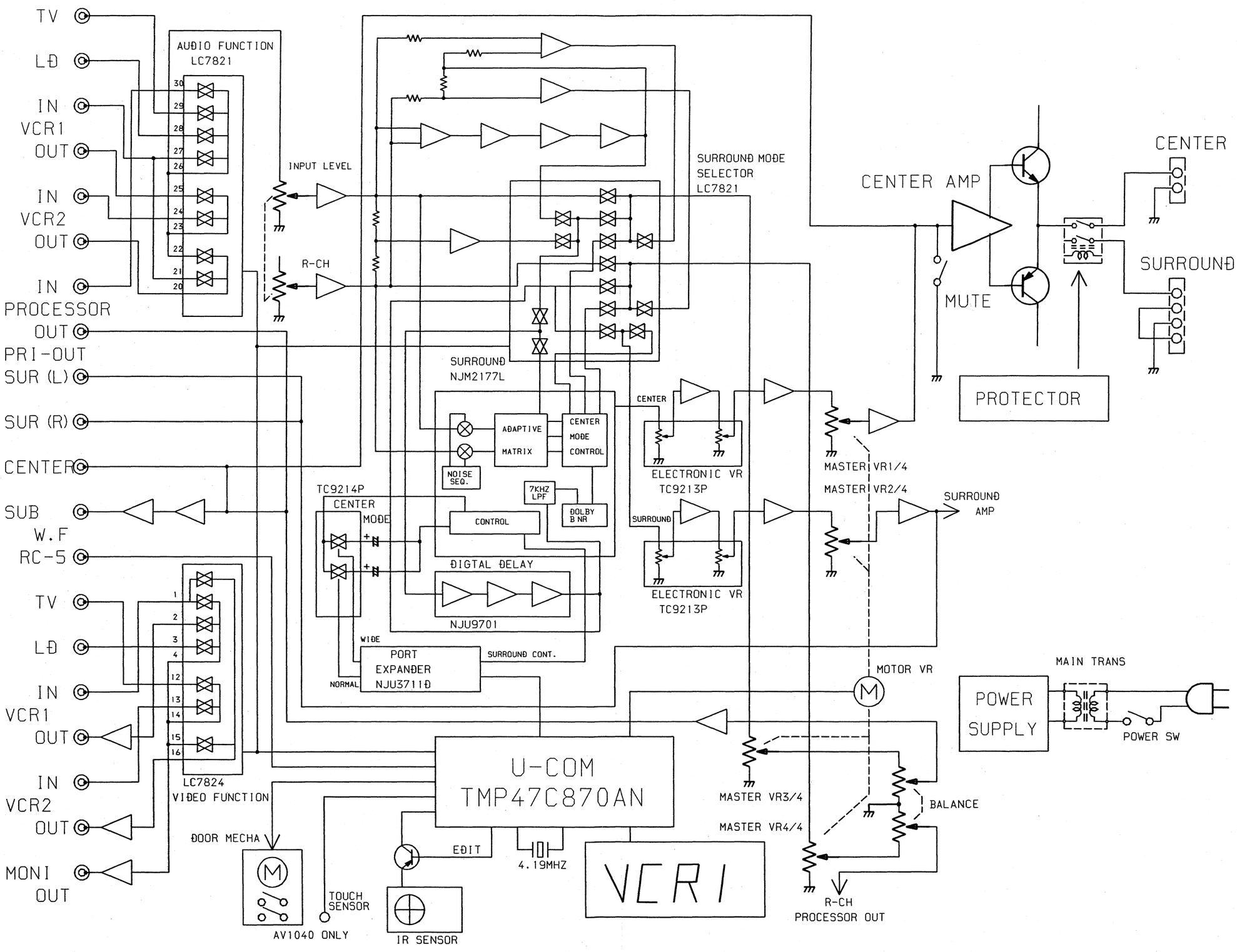
Stereo Audio cable × 2

Remote cable × 1

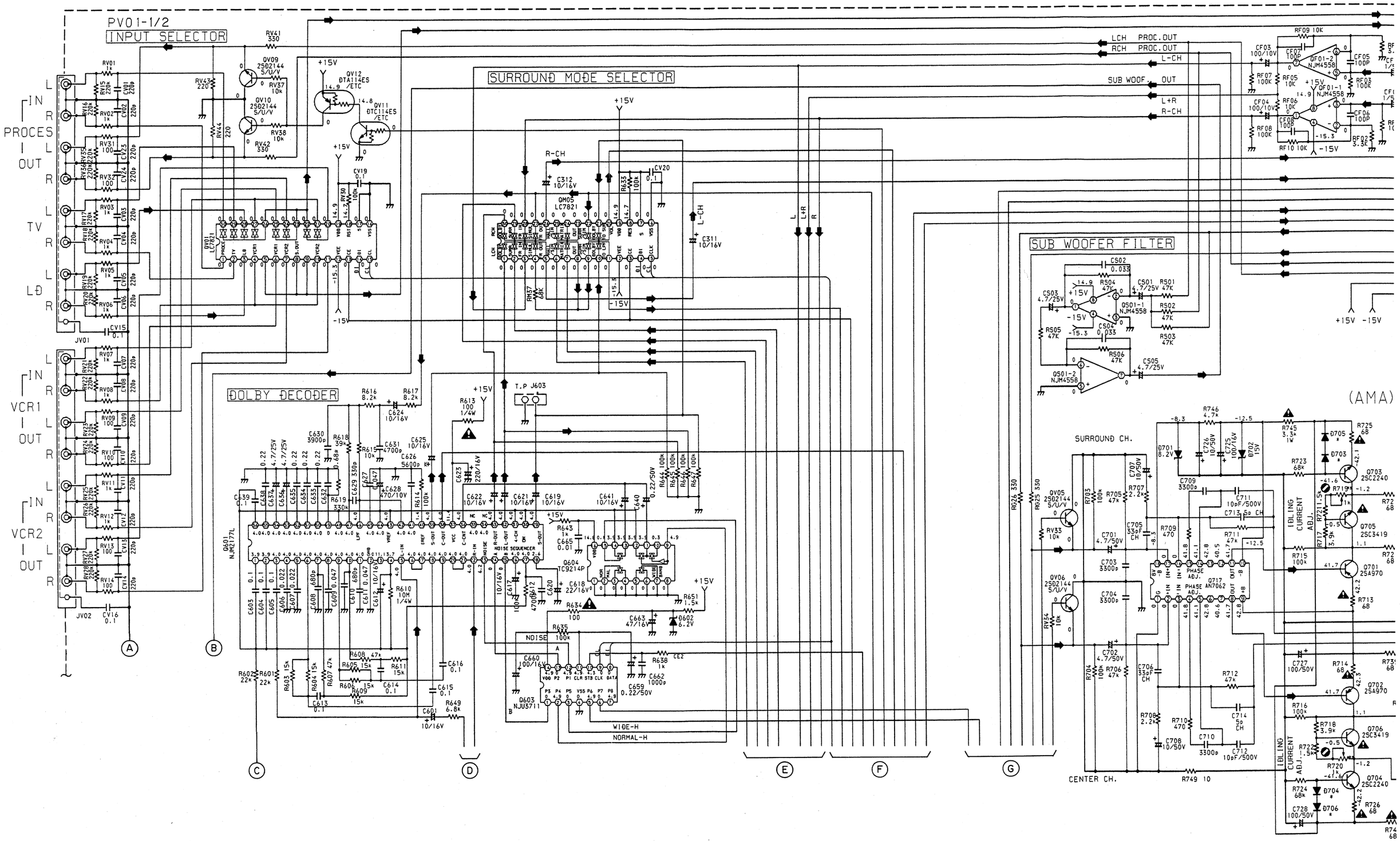
AC Adaptor × 1 (only 1A/1B version)

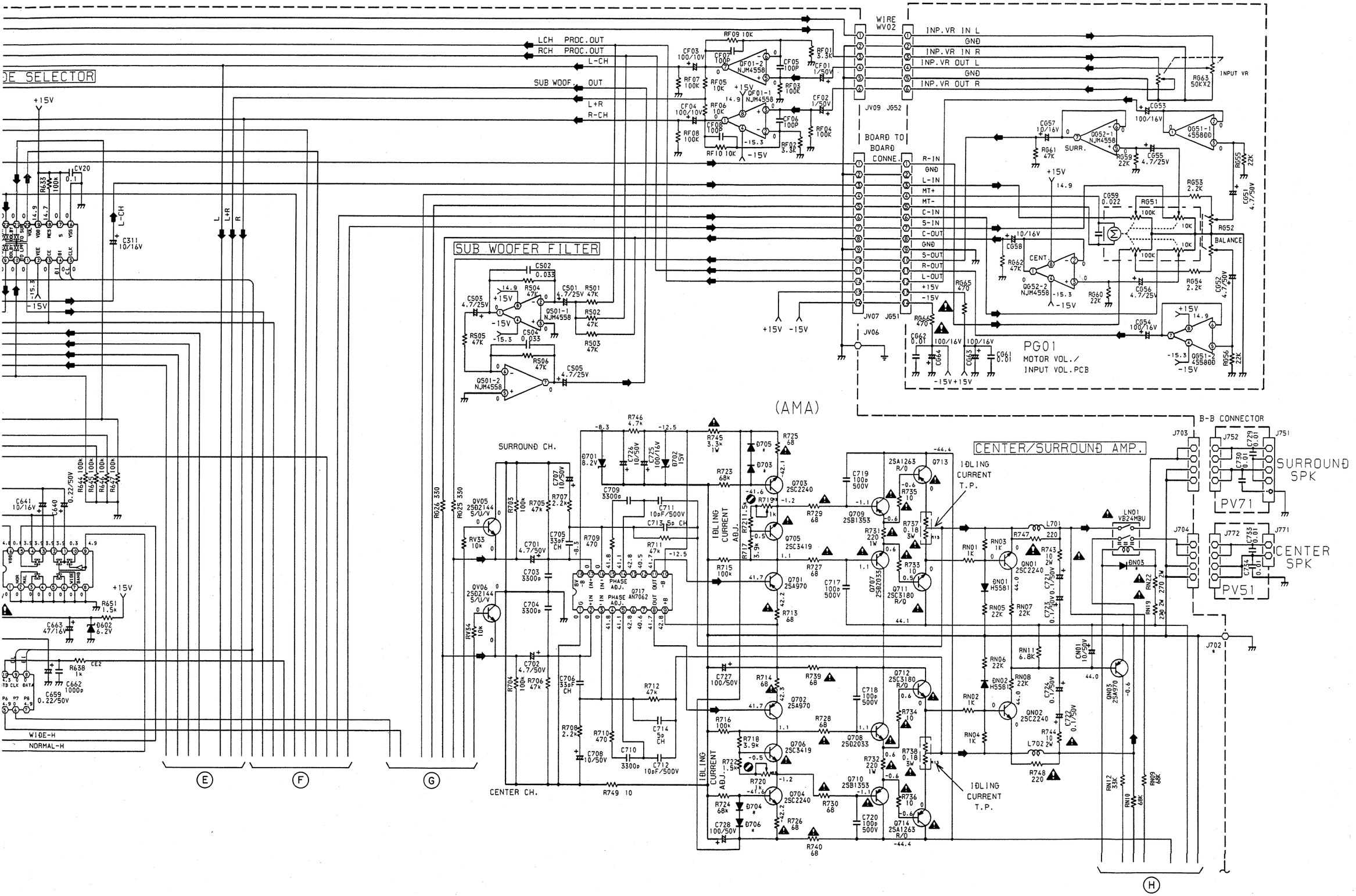
Specifications subject to change without prior notice.

2. BLOCK DIAGRAM



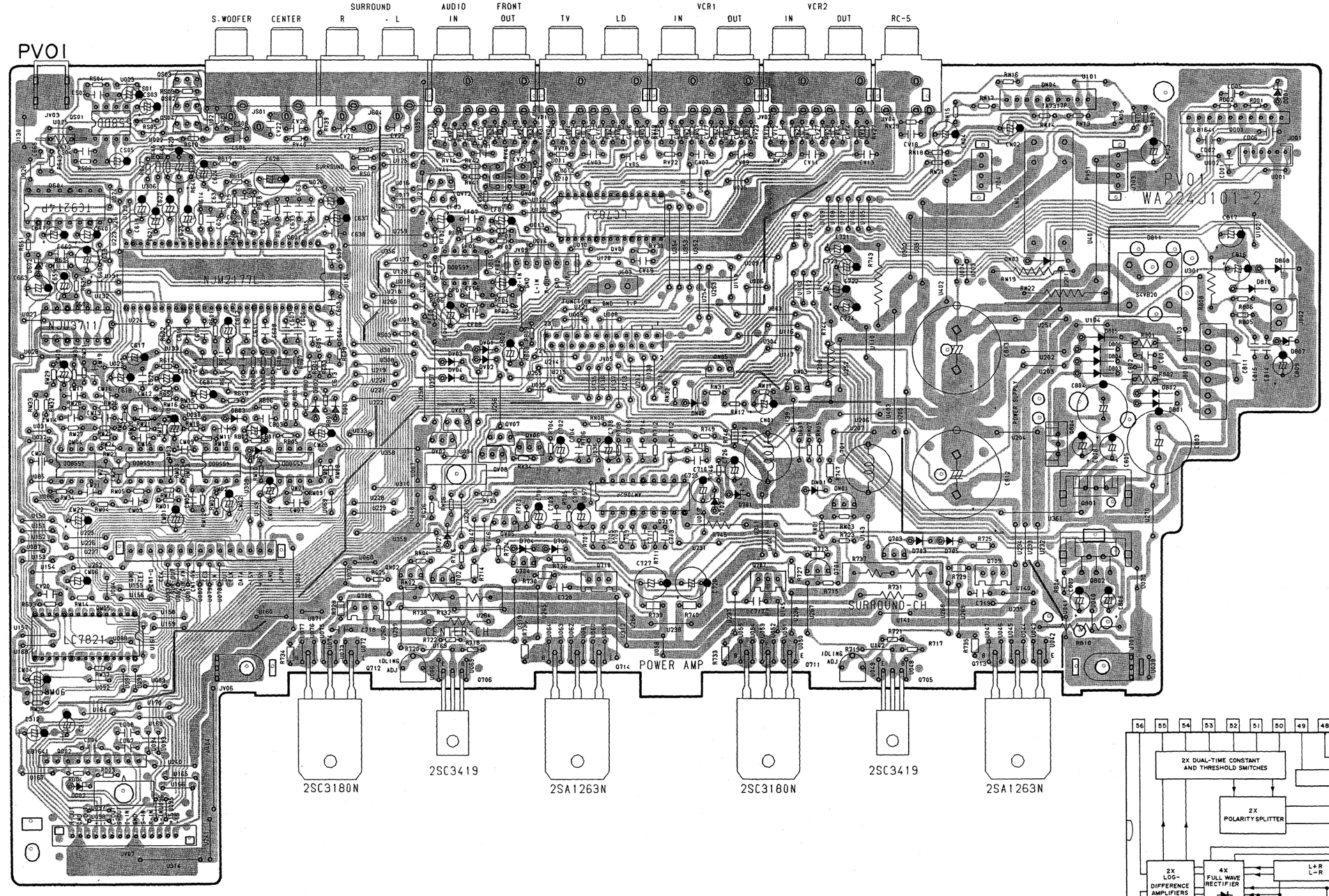
3. SCHEMATIC DIAGRAM AND PARTS LOCATION (Pattern side)



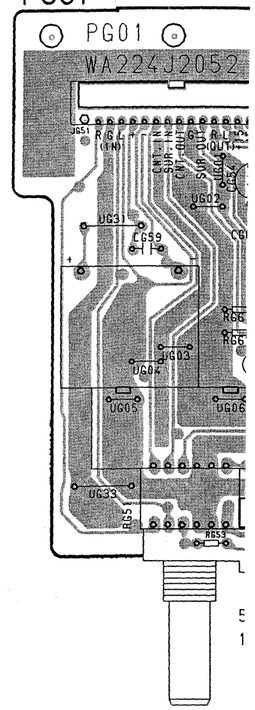

DE SELECTOR
+15V
CV20 0.1
R633 MIX 100K
L-CH
C311 10/16V
-15V
R644 100K
R645 100K
R646 100K
R647 100K
0.22/50V
C641 10/16V
C640
+15V
R651 1.5k
C663 47/16V
D602 6.2V
R638 1k
C662 1000p
C659 0.22/50V
WIDE-H
NORMAL-H
L
L+R
R
LCH PROC.OUT
RCH PROC.OUT
L-CH
SUB WOOF OUT
L+R
R-CH
SUB WOOFER FILTER
CS02 0.033
R504 47K
CS01 4.7/25V
RS01 47K
CS03 4.7/25V
QS01-1 NJM4558
RS02 47K
CS04 0.033
RS05 47K
RS03 47K
R506 47K
QS01-2 NJM4558
CS05 4.7/25V
RF09 10K
CF03 100/10V
CF07 100P
QF01-2 NJM4558
CF05 100P
RF01 3.3K
CF01 1/50V
RF07 100K
RF05 10K
RF03 100K
CF04 100/10V
RF06 10K
QF01-1 NJM4558
CF06 100P
CF02 1/50V
CF08 100P
RF04 100K
RF08 100K
RF10 10K
RF02 3.3K
+15V
-15V
WIRE WV02
INP.VR IN L
GND
INP.VR IN R
INP.VR OUT L
GND
INP.VR OUT R
INPUT VR
RG63 50KX2
JV09 JG52
BOARD TO BOARD CONNE.
R-IN
GND
L-IN
MT+
MT-
C-IN
S-IN
C-OUT
GND
S-OUT
R-OUT
L-OUT
+15V
-15V
JV07 JG51
JV06
CG53 100/16V
CG57 10/16V
QG52-1 NJM4558
SURR.
RG61 47K
RG59 22K
CG55 4.7/25V
QG51-1 4558DD
RG55 22K
CG51 4.7/50V
CG59 0.022
RG51 100K
RG53 2.2K
10K
RG52 BALANCE
100K
CG58 10/16V
RG62 47K
CENT
QG52-2 NJM4558
RG60 22K
CG56 4.7/25V
RG54 2.2K
CG52 4.7/50V
RG65 470
RG66 470
CG62 0.01
CG64 100/16V
CG63 100/16V
CG61 0.01
CG54 100/16V
QG51-2 4558DD
RG56 22K
PG01
MOTOR VOL./
INPUT VOL.PCB
(AMA)
SURROUND CH.
CENTER CH.
QV05 2SD2144 S/U/V
QV06 2SD2144 S/U/V
RV33 10k
RV34 10k
RG26 330
RG25 330
R703 100k
R705 47k
R707 2.2k
C701 4.7/50V
C703 3300p
C704 3300p
C702 4.7/50V
R704 100k
R706 47k
C705 33pF CH
C706 33pF CH
R708 2.2k
C708 10/50V
R709 470
R710 470
C709 3300p
C710 3300p
R711 47k
R712 47k
C711 10pF/500V
C713 5p CH
C714 5p CH
C712 10pF/500V
R749 10
D701 8.2V
C726 10/50V
C725 100/16V
D702 15V
R745 3.3k 1W
R746 4.7k
D705 *
D703 *
R725 68
R723 68k
Q703 2SC2240
R719 1k
R729 68
R715 100k
Q705 2SC3419
R717 3.9k
R7211.5k
Q701 2SA970
R713 68
C719 100p 500V
Q709 2SB1353
R735 10
R731 220 1W
R737 0.18 3W
R733 10
Q707 2SB2033
Q711 2SC3180 R/O
Q713
C717 100p 500V
IDLING CURRENT ADJ.
PHASE ADJ.
Q717 AN7062
R727 68
R739 68
C727 100/50V
R714 68
Q702 2SA970
R716 100k
R728 68
C718 100p 500V
Q708 2SD2033
R734 10
R718 3.9k
Q706 2SC3419
R722 1.5k
R720 1k
R732 220 1W
R738 0.18 3W
Q710 2SB1353
R736 10
Q704 2SC2240
R724 68k
D704 *
D706 *
R726 68
R730 68
C728 100/50V
C720 100p 500V
Q712 2SC3180 R/O
Q714 2SA1263 R/O
R740 68
IDLING CURRENT T.P.
CENTER/SURROUND AMP.
B-B CONNECTOR
J703
J752
J751
C729 0.01
C730 0.01
SURROUND SPK
PV71
J704
J772
J771
C733 0.01
C734 0.01
CENTER SPK
PV51
LN01 VB24MBU
DN03 *
RN22 270 2W
RN19 270 2W
L701
R747 220
R743 10 2W
L702 10 2W
R748 220
RN01 1K
RN03 1K
DN01 HS581
RN05 22K
RN07 22K
QN01 2SC2240
C721 0.1/50V
C725 0.1/50V
RN02 1K
RN04 1K
RN06 22K
DN02 HS581
RN08 22K
QN02 2SC2240
C724 0.1/50V
C722 0.1/50V
RN11 6.8K
CN01 10/50V
QN03 2SA970
RN12 33K
RN10 68K
RN09 68K
J702 *
E
F
G
H

Q604 Q603 QS01 QS02 QS04 QG01 QF01 QV09 QV12 QV01 QN04 QD01
QM04 QM03 QM02 QM01 QV02 QV03 QV05～QV08 QN05 QN03 QN01 Q804 Q801
QD02 QM05 Q712 Q708 QN02 Q702 Q706 Q704 Q714 Q710 Q717 Q707 Q711 Q701 Q703 Q705 Q709 Q713 Q802

PV01

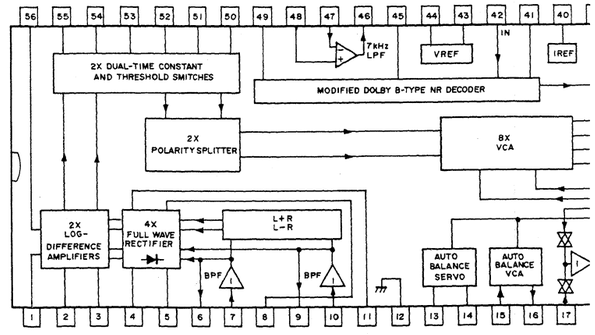


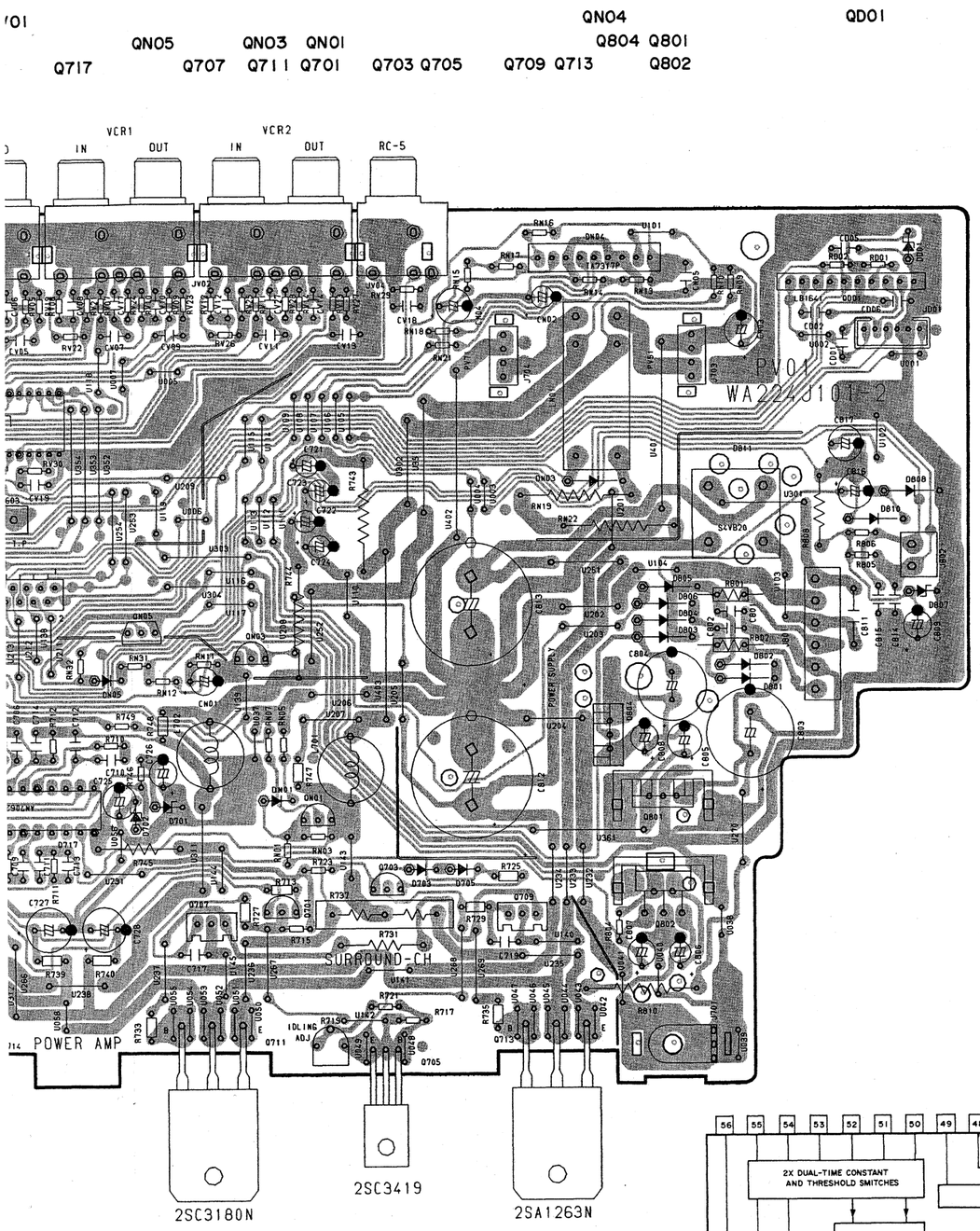
PG01

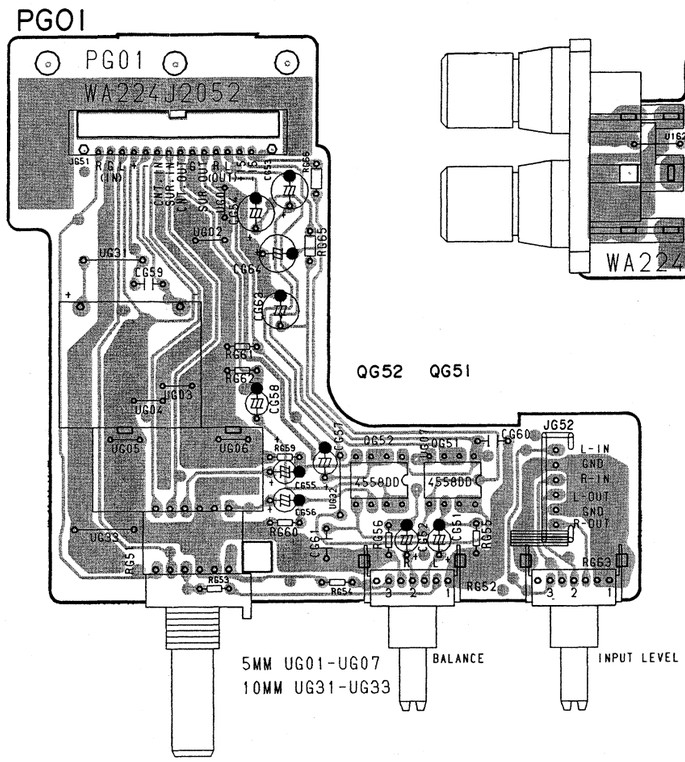


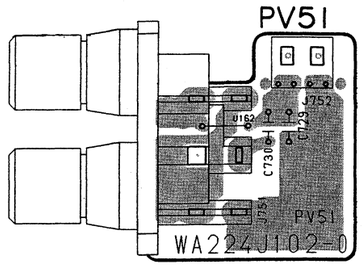
PV01
WA224J0112

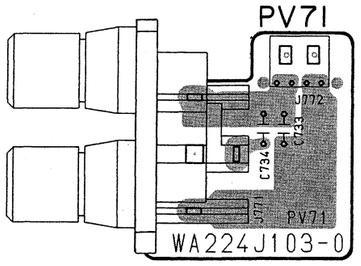
Q601 : NJM2177L



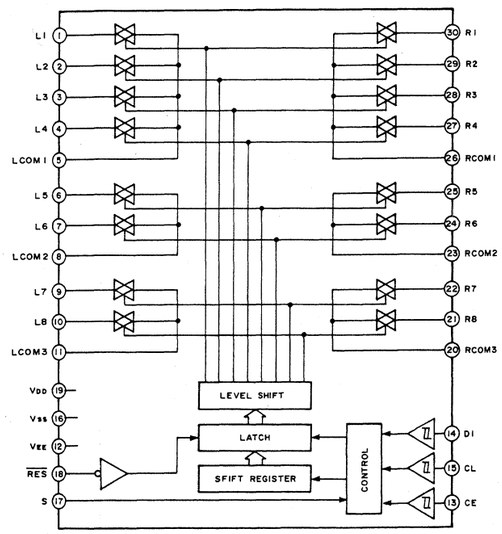




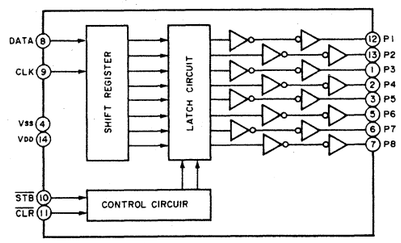




QM05, QV01 : LC7821



Q603 : NJU3711



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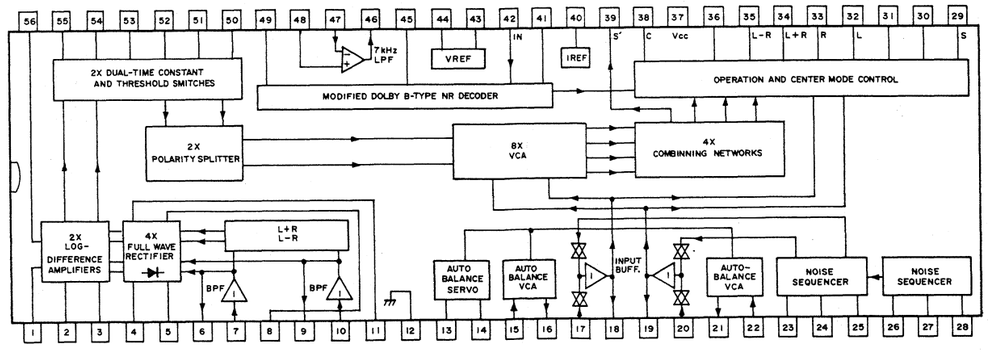
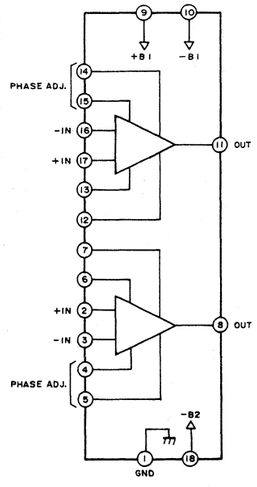
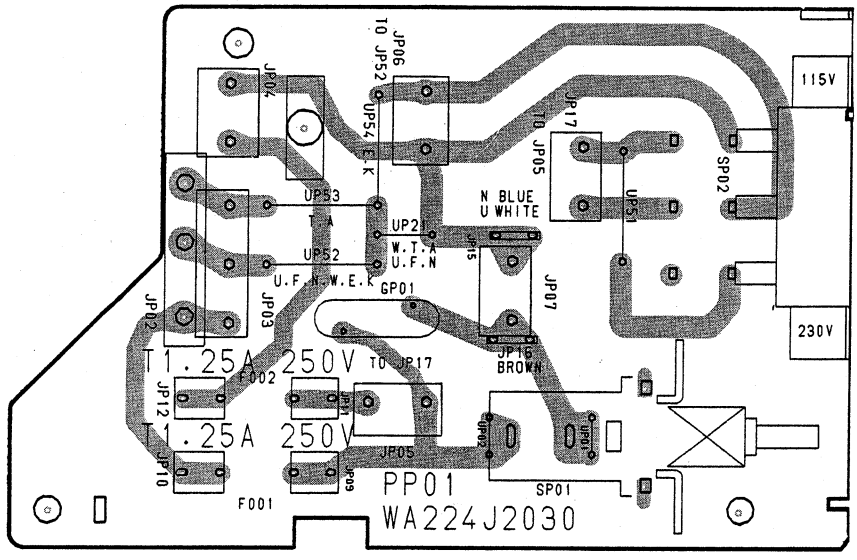


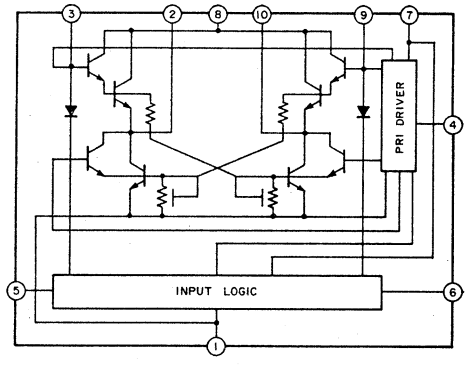
Q717 : AN7062



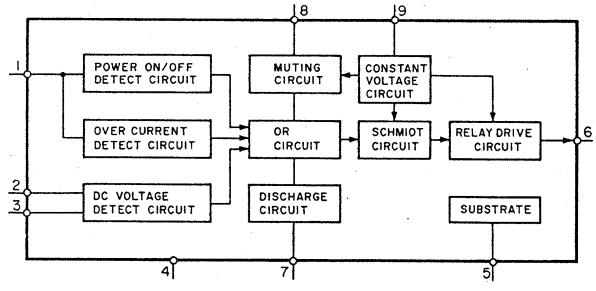
PP01



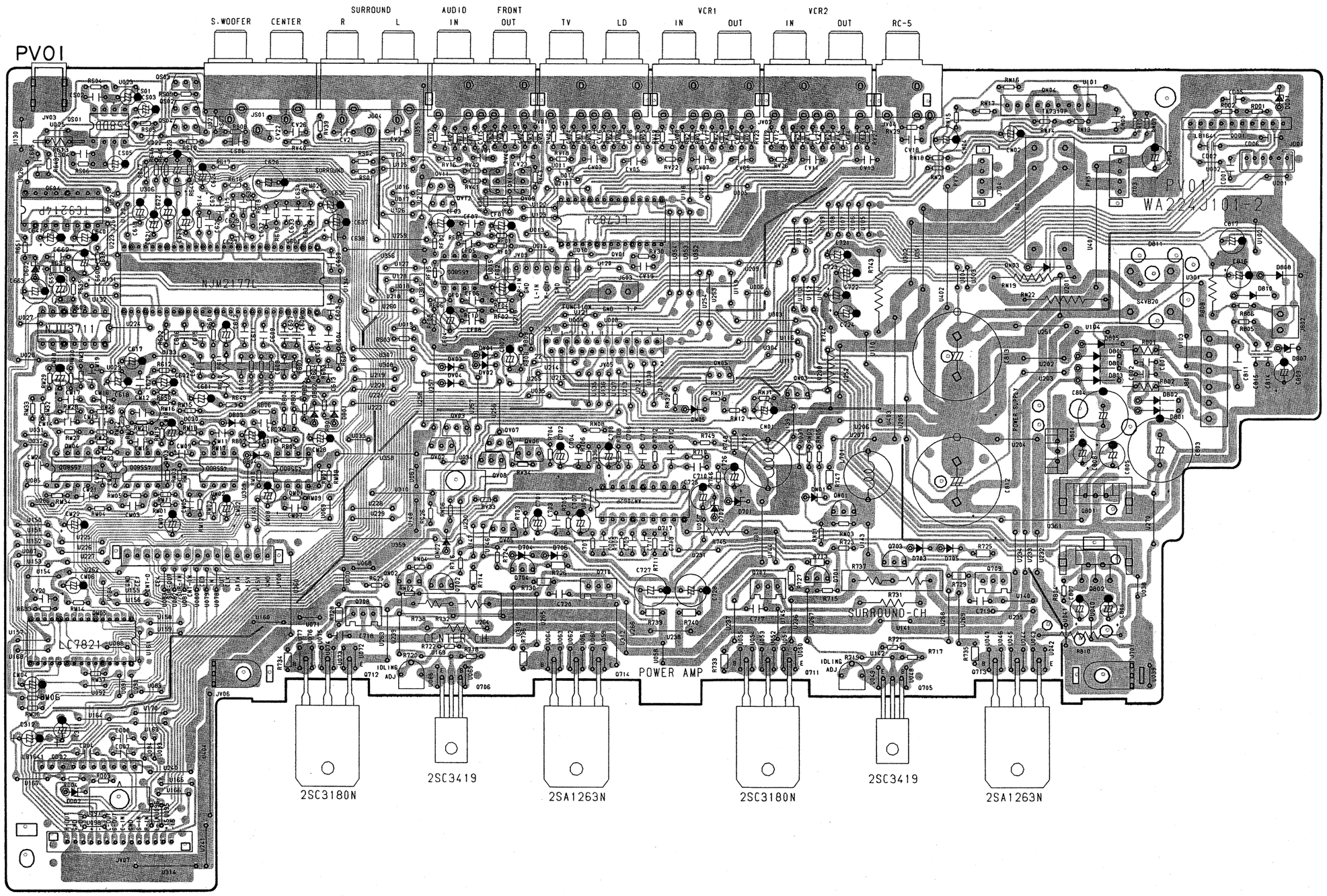
QD01, QD02 : LB1641



QN04 : TA7317P



Q604 Q603 QS01 QS02 QS04 QG01 QF01 QV09 QV12 QV01 QN04 QD01
QM04 QM03 QM02 QM01 QV02 QV03 QV05～QV08 QN05 QN03 QN01 Q804 Q801
QD02 QM05 Q712 Q708 QN02 Q702 Q706 Q704 Q714 Q710 Q717 Q707 Q711 Q701 Q703 Q705 Q709 Q713 Q802



U:USA

PP01 POWER SW. PCB

F:JAPAN

PP01 POWER SW. PCB

E:1A/1B

PP01 POWER SW

PV01-2/2

PRE-OUT

J604

L

SURR.

R

CENT.

SUB.WF

IN

RC-5

OUT

J501

MATRIX/HALL

L+R

L-R

R+ (L-R)

L (L-R)

SURR.

CENT.

MAIN AMP

(KMA)

VOLUME MOTOR ÐRIVE

LB1641

POWER SUPPL

AV1040 ONLY

ÐOOR MOTOR ÐRIVE

QÐ01 LB1641

JÐ01

021C

008C

ÐOOR MOTOR

016C

LIMIT SW1

016C

LIMIT SW2

CLOSE

OPEN

FUNCTION : LÐ

MOÐE : ÐOLBY WIÐE

VOLUME : MINIMUM

INPUT VR: CENTER

ÐOOR : CLOSE

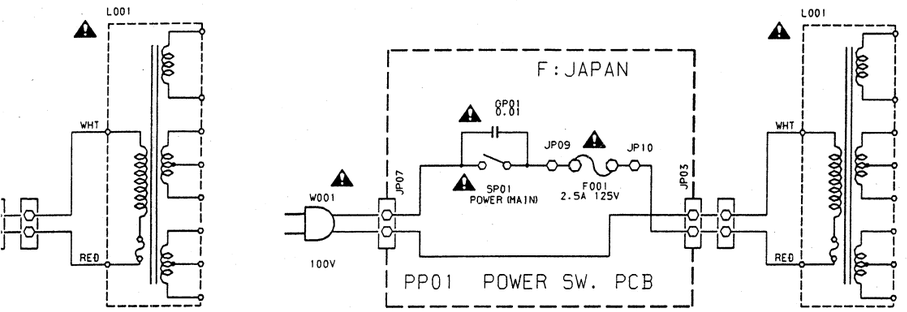
JV08

TO JL03

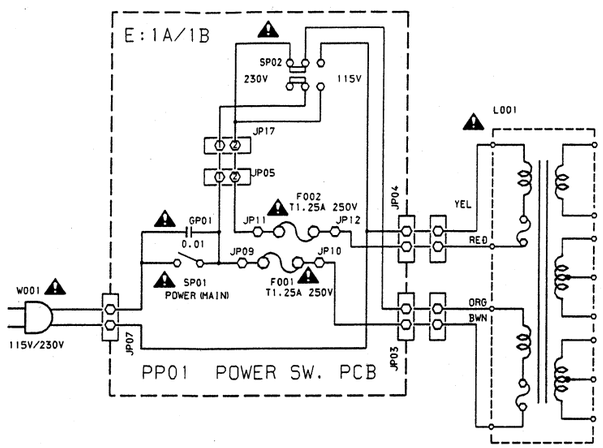
JV05

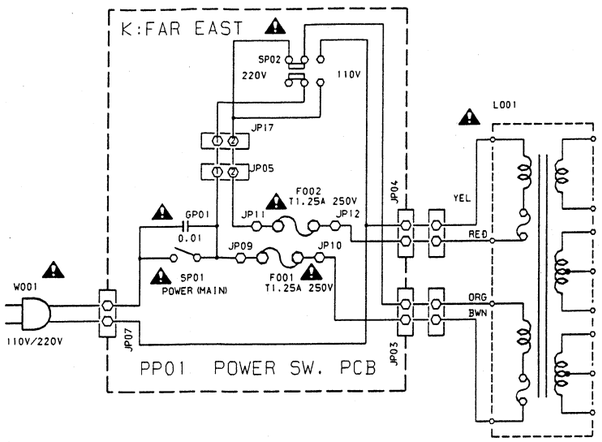
WV01 TO JU01 (PU04)

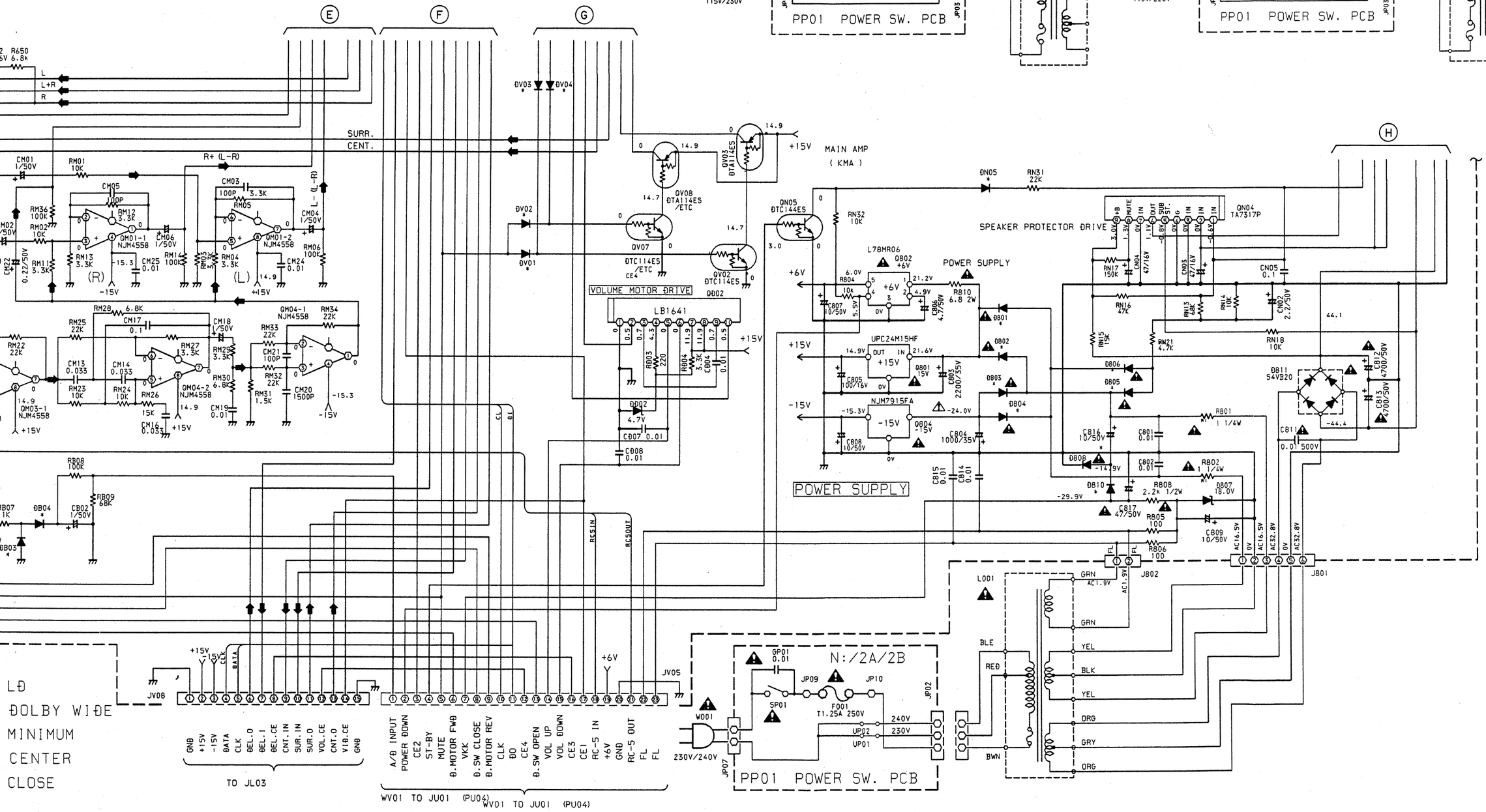
WV01 TO JU01 (PU04)


L001
WHT
RED

F:JAPAN
GP01 0.01
JP09
JP10
SP01 POWER (MAIN)
F001 2.5A 125V
W001
100V
JP07
JP03
PP01 POWER SW. PCB
L001
WHT
RED


E:1A/1B
SP02
230V
115V
JP17
JP05
F002 T1.25A 250V
JP11
JP12
JP04
GP01 0.01
JP09
JP10
SP01 POWER (MAIN)
F001 T1.25A 250V
L001
YEL
RED
ORG
BWN
W001
115V/230V
JP07
JP03
PP01 POWER SW. PCB


K:FAR EAST
SP02
220V
110V
JP17
JP05
F002 T1.25A 250V
JP11
JP12
JP04
GP01 0.01
JP09
JP10
SP01 POWER (MAIN)
F001 T1.25A 250V
L001
YEL
RED
ORG
BWN
W001
110V/220V
JP07
JP03
PP01 POWER SW. PCB


E
F
G
H
L
L+R
R
SURR.
CENT.
R+ (L-R)
L- (L-R)
QV03 QV04
QV02 QV03 QV07 QV08
DTA114ES /ETC
DTC114ES /ETC
+15V
MAIN AMP
(KMA)
QN05 DTC144ES
QN04 TA7317P
SPEAKER PROTECTOR DRIVE
POWER SUPPLY
L78MR06 Q802 +6V
UPC24M15HF
NJM7915FA
-15V
-24.0V
R810 6.8 2W
R801 1 1/4W
R802 1 1/4W
R808 2.2k 1/2W
R805 100
R806 100
D801
D802
D803
D804
D805
D806
D807 18.0V
D808
D810
D811 S4VB20
C801 0.01
C802 0.01
C803 2200/35V
C804 1000/35V
C805 100/16V
C806 4.7/50V
C807 10/50V
C808 10/50V
C809 10/50V
C811 0.01 500V
C812 4700/50V
C813 4700/50V
C814 0.01
C815 0.01
C816 10/50V
C817 47/50V
CN02 2.2/50V
CN03 47/16V
CN04 47/16V
CN05 0.1
RN17 150k
RN16 47k
RN15 15k
RN21 4.7k
RN18 10k
RN14 10k
RN15 68k
J801
J802
AC1.9V
AC16.5V
AC32.8V
0V
FL
GRN
YEL
BLK
ORG
GRY
BLE
RED
BWN
L001
W001
230V/240V
240V
230V
SP01
JP09
JP10
JP02
F001 T1.25A 250V
GP01 0.01
N:/2A/2B
JP07
PP01 POWER SW. PCB
VOLUME MOTOR DRIVE
Q002
LB1641
RC5IN
RC5OUT
CL
DL
JV05
JV08
TO JL03
WV01 TO JU01 (PU04)
LD
DOLBY WIDE
MINIMUM
CENTER
CLOSE
GND +15V -15V DATA CLK DEL.O DEL.I DEL.CE CNT.IN SUR.IN SUR.O VOL.CE CNT.O VID.CE GND
A/B INPUT POWER DOWN CE2 ST-BY MUTE D.MOTOR FWD VCK D.SW CLOSE D.MOTOR REV CLK DO CE4 D.SW OPEN VOL UP VOL DOWN CE3 CE1 RC-5 IN +6V GND RC-5 OUT FL FL FL

PL01 VIÐEO/SURROUND & ELE. VOLUME

To JV08 (PV01)

GND VID.CE1 CNT.OUT VOL.CE4 SUR.OUT SUR.IN CNT.IN DEL.CE3 DEL.IN DEL.OUT CLK DATA -15V +15V GND

JL03

VIÐEO SELECTOR

TV
LD
IN VCR1
OUT
IN VCR2
OUT
MONI

JL01 JL02

CL05 10/16V CL01 100/10V CL04 100/10V CL02 100/10V CL03 100/10V CL08 10/16V CL12 470/10V CL09 100/10V CL13 470/10V CL14 470/10V CL10 100/10V CL11 100/10V CL15 100/16V CL16 47/16V CL17 1000P CL18 47/16V CL19 47/16V

RL01 47 RL02 47 RL03 47 RL05 1K RL08 68 RL04 47 RL09 68 RL06 1K RL10 68 RL07 1K RL18 10K RL19 10K RL17 10K RL14 10K RL16 10K RL20 1.8K RL11 470 RL13 470 RL21 2.2K RL12 470 RL15 10K RL22 22 1/4W RL23 2.2K RL24 2.2K

+5V 5.1 -5V -5.1 +15V

2SC536 SP/ETC QL02 QL03 QL04

QL01 LC7824 VDD SCK SDA VSS VEE CCE DDI CCL DATA CLK

DL01 5.1V DL02 5.1V

CENTER/SURROUND VOLUME

SURR CENT CENTER

RG15 220 RG05 15K CG13 560P CG11 0.01 RG13 10K RG11 1K CG09 4.7/25V RG17 100K CG05 4.7/25V QG01-1 4558DD QG01-2 4558DD

RG03 3.3K RG01 330K CG03 1/50V CG07 4.7/25V RG14 8.2K RG07 330K CG01 1/50V CG20 10/16V

QG02 TC9213P VDD VSS STB DATA GND S7 CLK DATA CLK

CG04 1/50V CG02 1/50V CG08 4.7/25V RG06 10K CG14 560P CG06 4.7/25V RG08 330K QG03-1 4558DD QG03-2 4558DD RG04 3.3K RG02 330K CG12 0.01 CG10 4.7/25V RG12 1K RG18 100K CG19 10/16V RG16 220

-15V

DIGITAL DELAY CONTROL

C642 10/16V R621 8.2k C643 4700p R620 100K R639 180 1/2W C644 5600p R622 8.2k R623 39k C645 220p R624 5.6k C646 0.1 R625 22 C647 47/16V C648 0.22 C649 0.22 R636 100k C650 0.1 R626 22 C651 4700p R627 8.2k C654 4700p R628 8.2k R629 8.2k R630 27k C652 270p C653 0.22/50V C656 0.01 C655 220/6.3V D601 5.1V

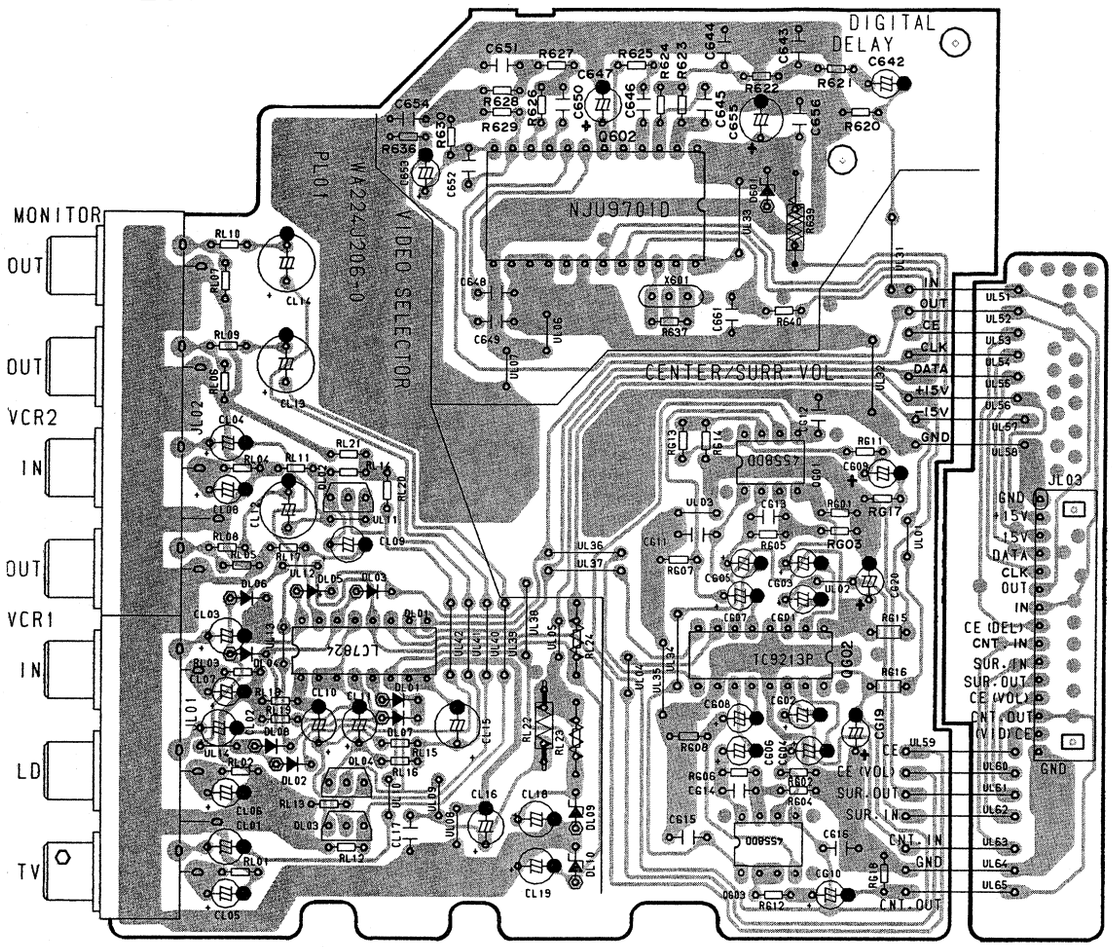
Q602 NJU9701 VCC IN OUT LPF1 REF IN OUT LPF2 VDD REQ SCK DATA IDFLG DIG ANA GND GND

R637 1M R640 1k C661 1000p X601 2.00MHz

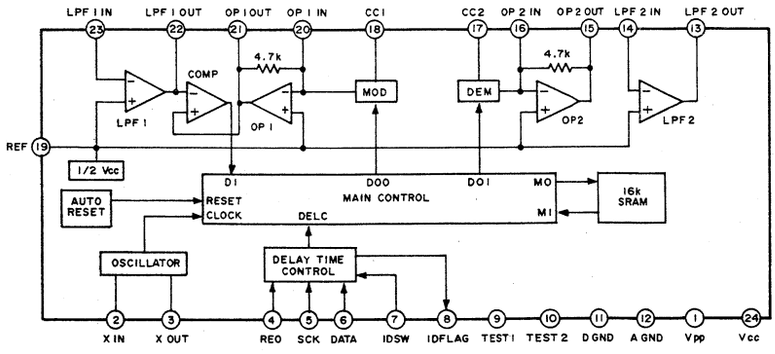
CLK DATA

QL02～QL04 QL01　　Q602　　QG03 QG01 QG02

PL01



Q602 : NJU9701



PU01 U-COM PCB

TO JU03 (PU54)

TO JU05 (PU54)

TO JU07 (PU54)

JU02

JU04

JU06

QU51 QU53 QU52

PU01

JU01

A/D INPUT
POWER DOWN
CE2
ST-BY
MUTE
D.MOTOR.FWD
VKK
DOOR SW CLOSE
D.MOTOR.REV
CLK
DO
CE4
DOOR SW OPEN
VOL.UP
VOL.DOWN
CE3
CE1
RC-5 IN
+6V
GND
RC-5 OUT
FL
FL

WV01
TO JV05
(PV04)

DU18

RU13 2.2K

RU02 2.2K

RU03 2.2K

GU01 10KX6

RU11 10K

GU02 10KX6

DU26

RU09 10K

RU08 3.3K

RU10 47K

CU03 100/6.3V

CU04 0.01

DU20

RU01 680

CU02 0.022F 5V

RU07 100K

CU01 220/6.3V

CU08 0.1/50V

XU01

DU19

AV1040 ONLY

DU24

DU09
DU10
DU11
DU12

GU03 100KX4

QU09 DTC144ES

QU11 DTA144ES

QU10 DTC144ES

DU17

QU06 DTA144ES

QU08 DTC144ES

DU23

QU07 DTA144ES

DU22

FUNCTION : LD
VOLUME : MINIMUM
DOOR : CLOSE

TOUCH KNOB
0060

WU01

JU10

AV1040 ONLY

CU51 47/16V

DU51

DU52

RU52 10K

RU53 470

RU51 10K

RU54 1M

RU55 1M

RU56 1M

CU52 220P

QU51 NJM082B0

CU53 4.7/50V

RU61 33K

RU60 33K

RU57 68K

QU53 DTC114ES

DU53 DU54 DU55

DU56

QU52 2SA608 SP/ETC

DU57

TO JU05 (PU54)

TO JU07 (PU54)

JU06

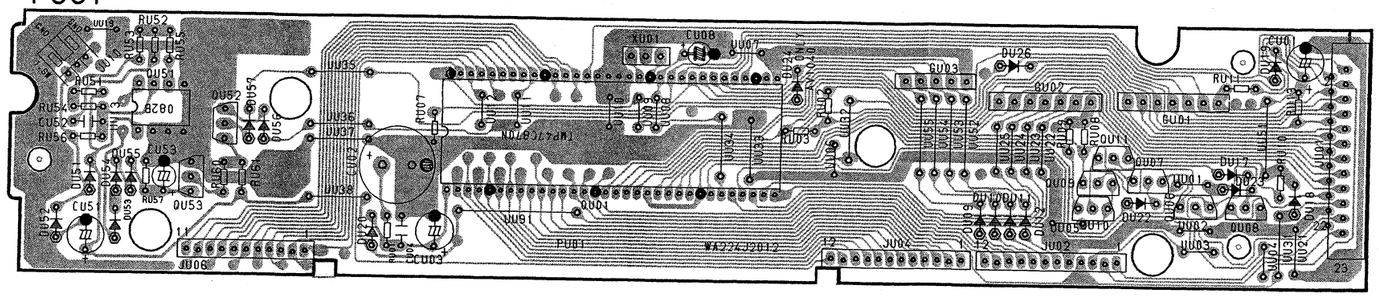
JU04

QU51 QU53 QU52

QU01

QU06 ~ QU11

PU01



DU18

RU13 2.2K

RU02 2.2K

RU03 2.2K

GU01 10KX6

RU11 10K

GU02 10KX6

DU26

RU09 10K

RU08 5.3K

RU10 47K

CU03 100/6.3V

CU04 0.01

DU20

RU01 680

CU02 0.022/F 5V

RU07 100K

CU01 220/6.3V

CU08 0.1/50V

XU01

DU19

AV1040 DNLY

DU24

DU09

DU10

DU11

DU12

GU03 100KX4

QU09 DTC144ES

QU11 DTA144ES

QU10 DTC144ES

DU17

QU06 DTA144ES

QU08 DTC144ES

DU23

QU07 DTA144ES

DU22

RU61 33K

RU60 33K

QU53 DTC114ES

QU52 2SA608 SP/ETC

DU56

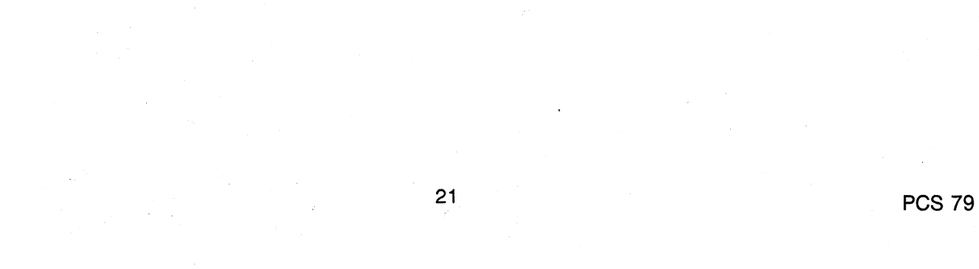
DU57

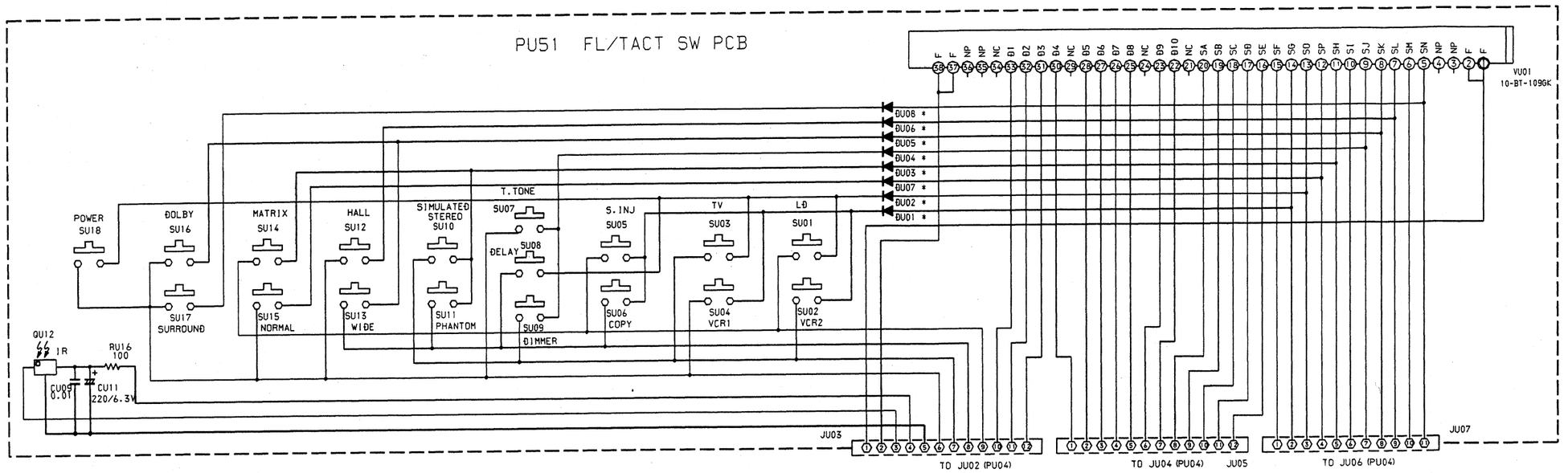
DU53 DU54 DU55

RU57 68K

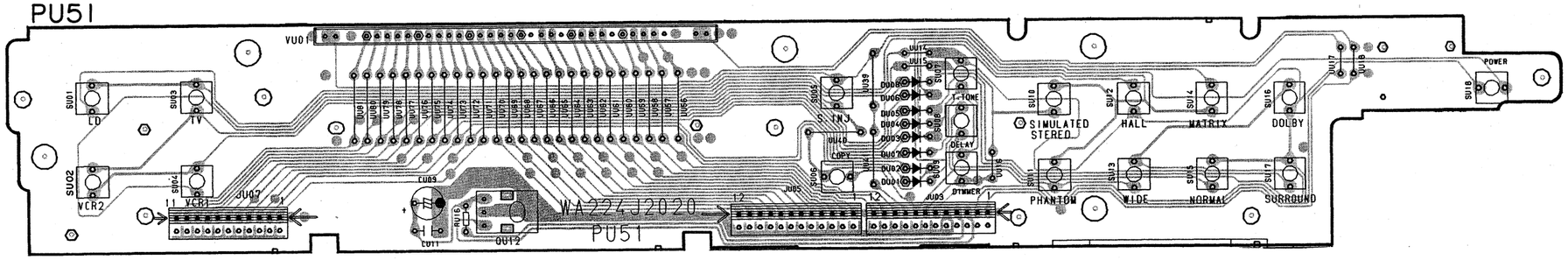
CU53 4.7/50V

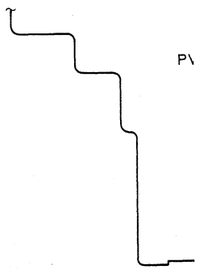
QU01 : TMP47C870AN





QU12





4. IDLING CURR

(1) Before switching control to the min controls to the cer Then, rotate the s R720 (Center) o
(2) Connect a digital the pertinent test on the PC board F
(3) After the completi Switch the powe R719 (Surround PV04 according t setting values are

Note:
When you proceed to unit, operate the unit minutes after turning i If you should proceed after turning the pow value to be adjusted.

Power ON
30 sec. ~ 1 min
1 min. ~ 2 min
2 min. ~ 3 min
More than 10 m

4. IDLING CURRENT ADJUSTMENT

(1) Before switching the power ON, set the Master Volume control to the minimum position and the Balance and Tone controls to the center positions.
Then, rotate the semi-fixed resistors R719 (Surround) and R720 (Center) on the PC board PV04 center positions.
(2) Connect a digital voltmeter, set for the DC voltage input to the pertinent test points (the marked ones of R737-R738) on the PC board PV04.
(3) After the completion of the above setup.
Switch the power ON and adjust the semi-fixed resistors R719 (Surround) and R720 (Center) on the PC board PV04 according to the reading of the digital voltmeter. The setting values are 7 mV (19.4 mA) of the both channels.

Note:
When you proceed to this adjustment after having serviced the unit, operate the unit with a non-signal condition for about 15 minutes after turning its power ON, then adjust to 7 mV.
If you should proceed to the adjustment in less than 15 minutes after turning the power ON, refer to the following table for the value to be adjusted.

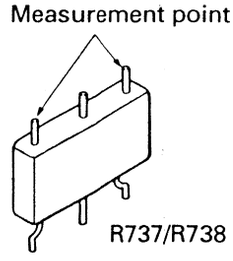
Power ON	
30 sec. ~ 1 min.	4.0 mV
1 min. ~ 2 min.	5.0 mV
2 min. ~ 3 min.	6.0 mV
More than 10 min.	7.0 mV

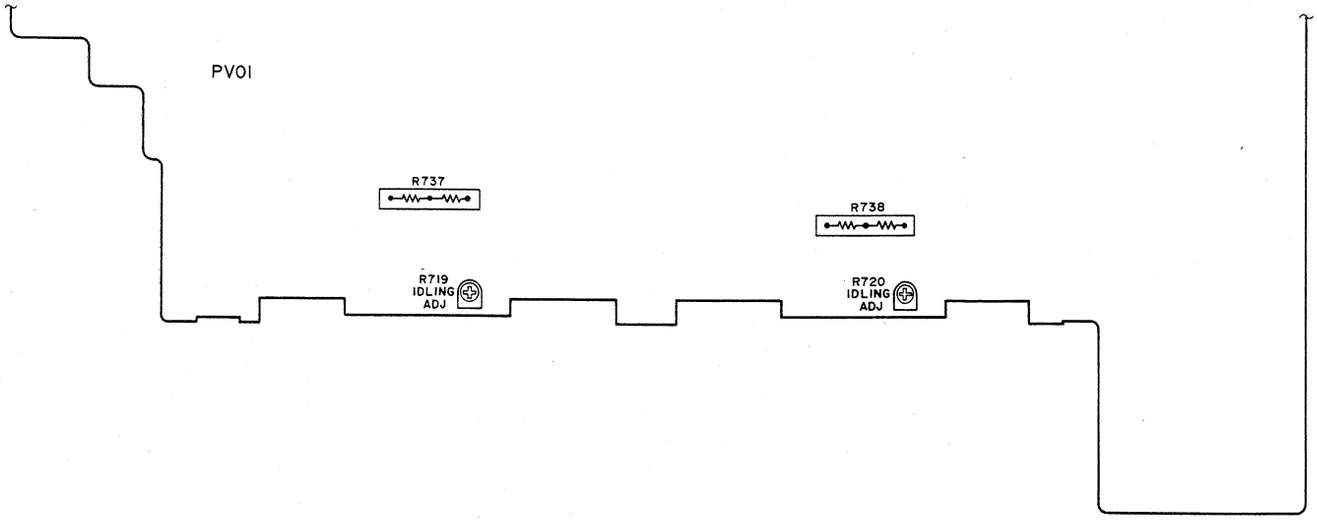
◘アイドリング電流の調整

（1）電源を投入しない状態で、マスターボリュームを最小の位置にします。
（2）電流調整用半固定抵抗 R719（Surround）、R720（Center）を中央の位置にします。
（3）セメント抵抗 R737（Surround）、R738（Center）の両端のピンに、デジタル電圧計を接続します。

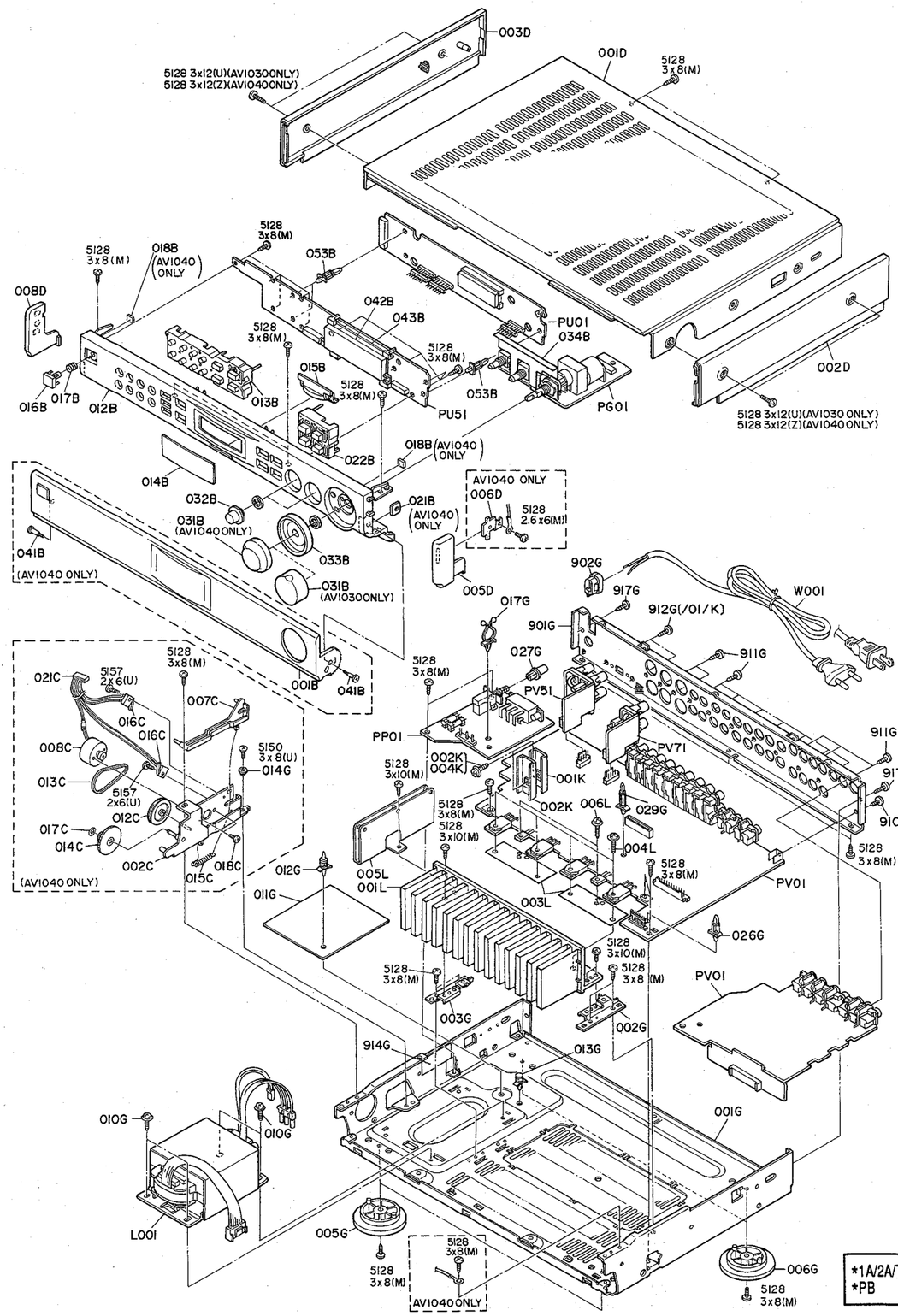
＊ 電源を投入しアイドリング電流を、下表に従って R719、R720 を調整します。

参考
アイドリング電流調整済みのセットを、冷えた状態から電源投入すると、30 秒後に約 3.5mV、1 分後に約 4.5mV に達する。10 分後には平衡状態となり、7mV で安定します。
従って、電源投入後、30 秒後～ 1 分以内に調整作業を行なう場合は「4mV」に調整します。同様に 1 分後～ 2 分以内の場合は「5mV」に、2 分後～ 3 分以内の場合は「6mV」に調整します。5 分後以降は、設定値である「7mV」に調整します。
尚、ヒートラン、エージング後あるいは修理後に調整を行なう場合は、10 分間無信号、無負荷、電源投入状態で放置し、その後設定値である「7mV」に調整します。





5. EXPLODED VIEW AND PARTS LIST



*1A/2A/TB/BZ (METALLIC BRONZE)
*PB (PEARL BLACK)

(U : U.S.A., K : FAR EAST, F : JAPAN, EUROPE : /XXX)

POS.NO	VERSION OR COLOR	PART NO. (FOR EUROPE)	DESCRIPTION	PART NO. (FOR U, K, F)
			AV1030	
012B		4822 426 51785	FRONT PANEL	157J248140
013B		4822 410 63508	BUTTON BLOCK (L)	157J270150
014B		4822 450 62144	FL WINDOW	271K158110
015B		4822 381 11434	IR LENS	271K355010
016B		4822 410 62877	POWER BUTTON	157J270130
017B		4822 492 33409	POWER BUTTON SPRING	271K115010
022B		4822 410 63511	BUTTON BLOCK (R)	157J270170
031B		4822 413 41823	MAIN VOLUME KNOB	206J154010
032B		4822 413 31775	TONE KNOB	157J154120
033B		4822 410 63512	MAIN VOLUME RING	224J154110
002D		4822 443 41304	SIDE PANEL (R)	157J249110
003D		4822 443 41305	SIDE PANEL (L)	157J249120
005D		4822 532 21483	SIDE BUSH (R)	206J259010
008D		4822 532 21484	SIDE BUSH (L)	206J259020
005G		4822 462 42063	LEG	157J057050
			AV1040	
001B	*1A/2A/TB/BZ	4822 426 60645	DOOR PANEL ASSY	157J063500
001B	*PB		DOOR PANEL ASSY	157J063510
012B	*1A/2A/TB/BZ	4822 426 51783	FRONT PANEL	157J248040
012B	*PB		FRONT PANEL	157J248240
013B	*1A/2A/TB/BZ	4822 410 63505	BUTTON BLOCK (L)	157J270050
013B	*PB		BUTTON BLOCK (L)	157J270250
014B		4822 450 62123	FL WINDOW	271K158010
015B		4822 381 11434	IR LENS	271K355010
016B	*1A/2A/TB/BZ	4822 410 62813	POWER BUTTON	157J270030
016B	*PB		POWER BUTTON	157J270230
017B		4822 492 33409	POWER BUTTON SPRING	271K115010
022B	*1A/2A/TB/BZ	4822 410 63506	BUTTON BLOCK (R)	157J270070
022B	*PB		BUTTON BLOCK (R)	157J270270
031B	*1A/2A/TB/BZ	4822 413 41818	MAIN VOLUME KNOB	157J154010
031B	*PB		MAIN VOLUME KNOB	157J154110
032B	*1A/2A/TB/BZ	4822 413 31768	TONE KNOB	157J154020
032B	*PB		TONE KNOB	157J154220
033B	*1A/2A/TB/BZ	4822 413 41887	MAIN VOLUME RING	224J154010
033B	*PB		MAIN VOLUME RING	224J154210
041B		4822 502 21379	DOOR SPECIAL SCREW	446T010010
007C		4822 404 21283	LEVER	446T354010
008C		4822 361 21687	MOTOR ASSY	*MM000630R
012C		4822 528 40363	PULLY	446T262020
013C		4822 358 31264	BELT	446T264010
014C		4822 522 33388	GEAR	446T058010
015C		4822 492 33411	SPRING	446T115010
016C		4822 271 30768	LEAF SW	SM01011530
017C		4822 462 71954	STOPPER, WASHER	204K114210
002D	*1A/2A/TB/BZ	4822 426 30156	SIDE PANEL (R)	157J249010
002D	*PB		SIDE PANEL (R)	157J249210
003D	*1A/2A/TB/BZ	4822 426 30157	SIDE PANEL (L)	157J249020
003D	*PB		SIDE PANEL (L)	157J249220
005D	*1A/2A/TB/BZ	4822 532 12253	SIDE BUSH (R)	157J259010
005D	*PB		SIDE BUSH (R)	157J259210
006D		4822 281 50181	TOUCH CONTACTOR	157J123010
008D	*1A/2A/TB/BZ	4822 532 12254	SIDE BUSH (L)	157J259020
008D	*PB		SIDE BUSH (L)	157J259220
005G		4822 462 42064	LEG	157J057110
			COMMON	
010G		4822 502 12511	B.T. SCREW (W/W) M3 x 8	51260308M0
027G		4822 410 60343	MAIN POWER BUTTON	058J270030
902G	U/F		AC CORD BUSH	450H259010
902G	K		AC CORD BUSH	085J259010
001T	/01 /02	4822 736 22226	USER MANUAL	
001T	U		USER MANUAL	224J851250
001T	K		USER MANUAL	224J851310
001T	F		USER MANUAL	224J851110

6. ELECTRICAL PARTS LIST

ASSIGNMENT OF COMMON PARTS CODES.

RESISTOR

R＊＊＊ : 1) GD05 x x x 140, Carbon film fixed resistor, ±5% 1/4W
R＊＊＊ : 2) GD05 x x x 160, Carbon film fixed resistor, ±5% 1/6W
(1) —— Resistance value

Examples :
(1) Resistance value

0.1Ω...001	10Ω...100	1kΩ...102	100kΩ...104
0.5Ω...005	18Ω...180	2.7kΩ...272	680kΩ...684
1Ω...010	100Ω...101	10kΩ...103	1MΩ...105
6.8Ω...068	390Ω...391	22kΩ...223	4.7MΩ...475

(Note) Please distinguish 1/4W from 1/6W by the shape of parts used actually.

C＊＊＊ : CERAMIC CAP.
1) DD1 x x x 370, Ceramic capacitor
Disc type
(1) (2) Temp.coeff.P350~N1000,50V
Capacity value
Tolerance

Examples
(1) Tolerance (Capacity deviation)
± 0.25pF ... 0
± 0.5pF ... 1
± 5% ... 5
＊ Tolerance of COMMON PARTS handled here are as follows :
0.5pF~ 5pF...± 0.25pF
6pF~ 10pF...± 0.5pF
12pF~ 560pF...± 5%
(2) Capacity value

0.5pF...005	3pF...030	100pF...101
1pF...010	10pF...100	220pF...221
1.5pF...015	47pF...470	560pF...561

C＊＊＊ : CERAMIC CAP.
1) DK16 x x x 300, High dielectric constant ceramic capacitor
(1) Disc type
Temp.chara. 2B4, 50V
Capacity value

Examples
(2) Capacity value

100pF...101	1000pF...102	10000pF...103
470pF...471	2200pF...222	

C＊＊＊ : ELECTROLY CAP.(⏚), FILM CAP.(⫩)
1) EA x x x x x x 10, Electrolytic capacitor
One-way lead type, Tolerance ± 20%
① ② Working voltage
Capacity value

Examples
(1) Capacity value

0.1μF...104	4.7μF...475	100μF...107
0.33μF...334	10μF...106	330μF...337
1μF...105	22μF...226	1100μF...118
		2200μF...228

(2) Working voltage

6.3V...006	25V...025	
10V...010	35V...035	
16V...016	50V...050	

2) DF15 x x x 350 } Plastic film capacitor
DF15 x x x 310 } One-way type, Mylar ± 5% 50V
DF16 x x x 310 Plastic film capacitor
One-way type, Mylar ± 10% 50V
① Capacity value

Examples
(1) Capacity value

0.001μF(1000pF)...102	0.1μF...104	
0.0018μF.....182	0.56μF...564	
0.01μF.....103	1μF...105	
0.015μF.....153		

NOTE : 1) The above CODES (R＊＊＊,R＊＊＊,C＊＊＊,C＊＊＊ and (C＊＊＊) are omitted on the schematic diagram in some case.
2) On the occasion, be confirmed the common parts on the parts list.
3) Refer to "Common Parts List" for the other common parts(**RI05, DD4, DK4**).

NOTE ON SAFETY FOR FUSIBLE RESISTOR :

The suppliers and their type numbers of fusible resistors are as follows ;

1. KOA Corporation

Part No.	Type No.	Description
NH05 x x x 140	RF25S x x x x Ω J	(± 5% 1/4W)
NH05 x x x 120	RF50S x x x x Ω J	(± 5% 1/2W)
NH85 x x x 110	RF73B2A x x x x Ω J	(± 5% 1/10W)
NH95 x x x 140	RF73B2E x x x x Ω J	(± 5% 1/4W)

＊ Resistance value — Resistance value (0.1-10kΩ)

2. Matsushita Electronic Components Co., Ltd

Part No.	Type No.	Description
NF05 x x x 140 RF05 x x x 140	ERD-2FCJ x x x	(± 5% 1/4W)
NF02 x x x 140 RF02 x x x 140	ERD-2FCG x x x	(± 2% 1/4W)

＊ Resistance value — ＊ Resistance value

Examples :
＊ Resistance value

0.1Ω...001	10Ω...100	1kΩ...102	100kΩ...104
0.5Ω...005	18Ω...180	2.7kΩ...272	680kΩ...684
1Ω...010	100Ω...101	10kΩ...103	1MΩ...105
6.8Ω...068	390Ω...391	22kΩ...223	4.7MΩ...475

ABBREVIATION AND MARKS

1	ANT.	: ANTENNA	2	BATT.	: BATTERY
3	CAP.	: CAPACITOR	4	CER.	: CERAMIC
5	CONN.	: CONNECTING	6	DIG.	: DIGITAL
7	HP	: HEADPHONE	8	MIC.	: MICROPHONE
9	μ-PRO	: MICROPROCESSOR	10	REC.	: RECORDING
11	RES.	: RESISTOR	12	SPK	: SPEAKER
13	SW	: SWITCH	14	TRANSF.	: TRANSFORMER
15	TRIM.	: TRIMMING	16	TRS.	: TRANSISTOR
17	VAR.	: VARIABLE	18	X'TAL	: CRYSTAL
19			20		
21			22		
23			24		
25			26		
27			28		
29			30		

NOTE ON SAFETY :

Symbol ⚠ Fire or electrical shock hazard. Only original parts should be used to replaced any part marked with symbol ⚠. Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

[VERS. : VERSION. U : U.S.A. F : Japan, K : Far East, /XX : Europe]

POS. NO.	VER. COLOR	PART NO. (For Europe)	DESCRIPTION	PART NO. (For U,K,F)
			PG01-MOTOR VR / BALANCE CIRCUIT BOARD	
			PG01-CAPACITORS	
CG51		4822 124 23057	ELECT 4.7μF 50V	EJ47505010
CG52		4822 124 23057	ELECT 4.7μF 50V	EJ47505010
CG53		4822 124 23052	ELECT 100μF 16V	EJ10701610
CG54		4822 124 23052	ELECT 100μF 16V	EJ10701610
CG55		4822 124 21899	ELECT 4.7μF 25V	EJ47502510
CG56		4822 124 21899	ELECT 4.7μF 25V	EJ47502510
CG57		4822 124 21894	ELECT 10μF 16V	EJ10601610
CG58		4822 124 21894	ELECT 10μF 16V	EJ10601610
CG59		4822 122 30103	CER. 0.022μF +80% -20% 50V	DK18223310
CG60		4822 122 30043	CER. 0.01μF +80% -20% 50V	DK18103310
CG61		4822 122 30043	CER. 0.01μF +80% -20% 50V	DK18103310
CG63		4822 124 23052	ELECT 100μF 16V	EJ10701610
CG64		4822 124 23052	ELECT 100μF 16V	EJ10701610
			PG01-RESISTORS	
RG51		4822 101 30865	100K Ω(B) x 4 VAR.	RY01040310
RG52		4822 101 30863	100K Ω(MN) VAR.	RM01041580
RG63		4822 101 30864	50K Ω(B) VAR.	RM05032070
⚠RG65		4822 052 10471	470 Ω ±5% 1/6W	GG05471160
⚠RG66		4822 052 10471	470 Ω ±5% 1/6W	GG05471160
			PG01-RESISTORS (COMMON)	
R＊＊＊			CARBON FILM FIXED RESISTOR, ±5% 1/6W : RG53~RG56, RG59~RG62	
			PG01-SEMICONDUCTORS	
QG51		4822 209 83631	IC NJM4558D-D	HC10008090
QG52		4822 209 83631	IC NJM4558D-D	HC10008090
			PL01-VIDEO SELECTOR CIRCUIT BOARD	
			PL01-CAPACITORS	
CG01 ~ CG04		4822 124 23053	ELECT 1μF 50V	EJ10505010
CG05 ~ CG10		4822 124 21899	ELECT 4.7μF 25V	EJ47502510
CG12		4822 122 30043	CER. 0.01μF +80% -20% 50V	DK18103310
CG13		4822 122 30043	CER. 0.01μF +80% -20% 50V	DK18103310
CG19		4822 124 21894	ELECT 10μF 16V	EJ10601610
CG20		4822 124 21894	ELECT 10μF 16V	EJ10601610
CL01 ~ CL04		4822 124 90353	ELECT 100μF 10V	OA10701020
CL05 ~ CL08		4822 124 21894	ELECT 10μF 16V	EJ10601610
CL09 ~ CL11		4822 124 90353	ELECT 100μF 10V	OA10701020
CL15		4822 124 23052	ELECT 100μF 16V	EJ10701610
CL16		4822 124 41539	ELECT 47μF 16V	OA47601620
CL18		4822 124 41539	ELECT 47μF 16V	OA47601620
CL19		4822 124 41539	ELECT 47μF 16V	OA47601620
C642		4822 124 21894	ELECT 10μF 16V	EJ10601610
C647		4822 124 41539	ELECT 47μF 16V	OA47601620
C653		4822 124 21895	ELECT 0.22μF 50V	EJ22405010
C655		4822 124 80087	ELECT 220μF 6.3V	EJ22700610
C656		4822 122 30043	CER. 0.01μF +80% -20% 50V	DK18103310
			PL01-CAPACITORS (COMMON)	
C＊＊＊			HIGH DIELECTRIC CONSTANT CERAMIC CAPACITOR, ±10% 50V : CG13, CG14, CL17, C645, C652, C661	
C＊＊＊			ELECTROLYTIC CAPACITOR, ±20% : CL12, CL13, CL14	
C＊＊＊			PLASTIC FILM CAPACITOR, ±5% 50V : C643, C644, C646, C648~C651, C654	
			PL01-RESISTORS	
⚠RG15		4822 052 10221	220 Ω ±5% 1/6W	GG05221160
⚠RG16		4822 052 10221	220 Ω ±5% 1/6W	GG05221160
⚠RL22		4822 113 90119	22 Ω ±2% 1/4W, FUSE	NF02220140
⚠R639		4822 050 21801	180 Ω ±5% 1/2W	GG05181120
			PL01-RESISTORS (COMMON)	
R＊＊＊			CARBON FILM FIXED RESISTOR, ±5% 1/6W : RG01~RG08, RG11~RG14, RG17, RG18, RL01~RL21, RL23, RL24, R620~R630, R633, R636, R637, R640	
			PL01-SEMICONDUCTORS	
DL01 ~ DL08		4822 130 33305	DIODE 1SS176, etc.	HD20002000
DL09		4822 130 80317	ZENER 5.1V	HD30511000
DL10		4822 130 80317	ZENER 5.1V	HD30511000
D601		4822 130 80317	ZENER 5.1V	HD30511000
QG01		4822 209 83631	IC NJM4558D-D	HC10008090
QG02		4822 209 31575	IC TC9213P	HC10304050
QG03		4822 209 83631	IC NJM4558D-D	HC10008090
QL01		4822 209 31538	IC LC7824	HC10275030
QL02		4822 130 42298	TRS. 2SC536SP, etc.	HT30001000
QL03		4822 130 42298	TRS. 2SC536SP, etc.	HT30001000
QL04		4822 130 42298	TRS. 2SC536SP, etc.	HT30001000
Q602		4822 209 32694	IC MJU9701D	HC10127090

[VERS. : VERSION. U : U.S.A. F : Japan, K : Far East, /XX : Europe]

POS. NO.	VER. COLOR	PART NO. (For Europe)	DESCRIPTION	PART NO. (For U,K,F)
			PL01-MISCELLANEOUS	
JL01		4822 265 30627	TERMINAL, 3P RCA	YT02030060
JL02		4822 266 30303	TERMINAL, 4P RCA	YT02040710
X601		4822 242 81525	CER. RESONATOR 2.0MHz	FQ02004030
			PP01-POWER SW CIRCUIT BOARD	
⚠GP01		4822 122 33276	CER. CAP. 0.01μF ±20%	DK17103840
⚠F001	/01/02	4822 070 31252	FUSE 1.25A 250V	
	U		FUSE 2.5A 125V (AV1040)	FS10250360
	K		FUSE 1.25A 250V (AV1040)	FS10125850
	F		FUSE 2.5A 125V (AV1040)	FS10250350
⚠F002	/01	4822 070 31252	FUSE 1.25A 250V	
	K		FUSE 1.25A 250V (AV1040)	FS10125850
⚠SP01		4822 276 12924	PUSH SW, POWER	SP01011540
⚠SP02	/01	4822 277 21763	SLIDE SW, VOL. SEL.	
	K		SLIDE SW, VOL. SEL. (AV1040)	SS02021240
			PU01-μ-COM CIRCUIT BOARD	
			PU01-CAPACITORS	
CU01		4822 124 80087	ELECT 220μF 6.3V	EJ22700610
CU02		4822 124 23295	BIG ELECT 0.022F	EX22300510
CU03		4822 126 10935	ELECT 100μF 6.3V	EJ10700610
CU04		4822 122 30043	CER. 0.01μF +80% -20% 50V	DK18103310
CU08		4822 124 41604	ELECT 0.1μF 50V	EJ10405010
CU51		4822 124 23056	ELECT 47μF 16V (AV1040)	EJ47601610
CU53		4822 124 21899	ELECT 4.7μF 25V (AV1040)	EJ47502510
			PU01-CAPACITORS (COMMON)	
C***			HIGH DIELECTRIC CONSTANT CERAMIC CAPACITOR, ±10% 50V : [CU52 (AV1040)]	
			PU01-RESISTORS (COMMON)	
R***			CARBON FILM FIXED RESISTOR, ±5% 1/6W : RU01~RU03, RU07~RU11, RU13, [RU51~RU57, RU60, RU61 (AV1040)]	

POS. NO.	VER. COLOR	PART NO. (For Europe)	DESCRIPTION	PART NO. (For U,K,F)
			PU01-SEMICONDUCTORS	
DU09 ~ DU12		4822 130 33305	DIODE 1SS176, etc.	HD20002000
DU17 ~ DU19		4822 130 33305	DIODE 1SS176, etc.	HD20002000
DU22		4822 130 33305	DIODE 1SS176, etc.	HD20002000
DU23		4822 130 33305	DIODE 1SS176, etc.	HD20002000
DU24		4822 130 33305	DIODE 1SS176, etc.	HD20002000
DU26		4822 130 33305	DIODE 1SS176, etc.	HD20002000
DU51 ~ DU57		4822 130 33305	DIODE 1SS176, etc. (AV1040)	HD20002000
QU01		4822 209 33822	μ-PRO. TMP47C870AN	HU224JT000
QU06		4822 130 42682	TRS. DIG. DTA144ES/UN4113	BA10002000
QU07		4822 130 42682	TRS. DIG. DTA144ES/UN4113	BA10002000
QU08		4822 130 42594	TRS. DIG. DTC144ES/UN4213	BA20002000
QU09		4822 130 42594	TRS. DIG. DTC144ES/UN4213	BA20002000
QU10		4822 130 42594	TRS. DIG. DTC144ES/UN4213	BA20002000
QU11		4822 130 42682	TRS. DIG. DTA144ES/UN4113	BA10002000
QU51		4822 209 63468	IC NJM082D (AV1040)	HC10066090
QU52		4822 130 42715	TRS. 2SA608SP (AV1040)	HT10001000
QU53		4822 130 60588	TRS. DIG. DTC114ES/UN4211 (AV1040)	BA20001000
			PU01-MISCELLANEOUS	
XU01		4822 242 72194	CER. RESONATOR 4.19MHz	FQ04194020
			PU51-FL TACT SW CIRCUIT BOARD	
			PU51-CAPACITORS	
CU09		4822 124 80087	ELECT 220μF 6.3V	EJ22700610
CU11		4822 122 30043	CER. 0.01μF +80% -20% 50V	DK18103310
			PU51-RESISTORS (COMMON)	
R***			CARBON FILM FIXED RESISTOR, ±5% 1/6W : RU16	
			PU51-SEMICONDUCTORS	
DU01 ~ DU08		4822 130 33305	DIODE 1SS176, etc.	HD20002000
QU12		4822 130 83519	PHOTO UNIT RPM-670CBR	HW10001210
			PU51-MISCELLANEOUS	
SU01 ~ SU18		4822 276 20508	PUSH SW, TACT	SP01011280
VU01		4822 130 91278	DISPLAY UNIT, FIP7JM9	HQ31012060

[VERS. : VERSION. U : U.S.A. F : Japan, K : Far East, /XX : Europe]

POS. NO.	VER. COLOR	PART NO. (For Europe)	DESCRIPTION	PART NO. (For U,K,F)
			PV01-MAIN FUNCTION CIRCUIT BOARD	
			PV01-CAPACITORS	
CB01		4822 124 21894	ELECT 10µF 16V	EJ10601610
CB02		4822 124 23053	ELECT 1µF 50V	EJ10505010
CD01		4822 122 30043	CER. 0.01µF +80% -20% 50V (AV1040)	DK18103310
CD02		4822 122 30043	CER. 0.01µF +80% -20% 50V (AV1040)	DK18103310
CD04		4822 122 30043	CER. 0.01µF +80% -20% 50V	DK18103310
CD05		4822 122 30043	CER. 0.01µF +80% -20% 50V (AV1040)	DK18103310
CD06		4822 122 30043	CER. 0.01µF +80% -20% 50V (AV1040)	DK18103310
CD07		4822 122 30043	CER. 0.01µF +80% -20% 50V	DK18103310
CD08		4822 122 30043	CER. 0.01µF +80% -20% 50V	DK18103310
CF01		4822 124 23053	ELECT 1µF 50V	EJ10505010
CF02		4822 124 23053	ELECT 1µF 50V	EJ10505010
CF03		4822 124 90353	ELECT 100µF 10V	OA10701020
CF04		4822 124 90353	ELECT 100µF 10V	OA10701020
CM01		4822 124 23053	ELECT 1µF 50V	EJ10505010
CM02		4822 124 23053	ELECT 1µF 50V	EJ10505010
CM04		4822 124 23053	ELECT 1µF 50V	EJ10505010
CM06		4822 124 23053	ELECT 1µF 50V	EJ10505010
CM08		4822 124 21895	ELECT 0.22µF 50V	EJ22405010
CM10		4822 124 23053	ELECT 1µF 50V	EJ10505010
CM15	/02	4822 122 31205	CER. 47pF ±5% 50V	
CM18		4822 124 23053	ELECT 1µF 50V	EJ10505010
CM22		4822 124 21895	ELECT 0.22µF 50V	EJ22405010
CM24		4822 122 30043	CER. 0.01µF +80% -20% 50V	DK18103310
CM25		4822 122 30043	CER. 0.01µF +80% -20% 50V	DK18103310
CM28		4822 124 23053	ELECT 1µF 50V	EJ10505010
CN01		4822 124 22571	ELECT 10µF 50V	OA10605020
CN02		4822 124 40786	ELECT 2.2µF 50V	EJ22505010
CN03		4822 124 23056	ELECT 47µF 16V	EJ47601610
CN04		4822 124 23056	ELECT 47µF 16V	EJ47601610
CN05		4822 122 40617	CER. 0.1µF +80% -20% 50V	DD38104010
CS01		4822 124 21899	ELECT 4.7µF 25V	EJ47502510
CS03		4822 124 21899	ELECT 4.7µF 25V	EJ47502510
CS05		4822 124 21899	ELECT 4.7µF 25V	EJ47502510
CV15		4822 122 40617	CER. 0.1µF +80% -20% 50V	DD38104010
CV17 ~ CV20		4822 122 40617	CER. 0.1µF +80% -20% 50V	DD38104010
CV22		4822 122 40617	CER. 0.1µF +80% -20% 50V	DD38104010
C311		4822 124 21894	ELECT 10µF 16V	EJ10601610
C312		4822 124 21894	ELECT 10µF 16V	EJ10601610
C601		4822 124 21894	ELECT 10µF 16V	EJ10601610
C602		4822 124 21894	ELECT 10µF 16V	EJ10601610
C612		4822 124 21894	ELECT 10µF 16V	EJ10601610
C617		4822 124 21894	ELECT 10µF 16V	EJ10601610
C618		4822 124 23055	ELECT 22µF 16V	EJ22601610
C619		4822 124 21894	ELECT 10µF 16V	EJ10601610
C621		4822 124 21894	ELECT 10µF 16V	EJ10601610
C622		4822 124 21894	ELECT 10µF 16V	EJ10601610
C623		4822 124 90364	ELECT 220µF 16V	OA22701620
C624		4822 124 21894	ELECT 10µF 16V	EJ10601610

POS. NO.	VER. COLOR	PART NO. (For Europe)	DESCRIPTION	PART NO. (For U,K,F)
C625		4822 124 21894	ELECT 10µF 16V	EJ10601610
C636		4822 124 21899	ELECT 4.7µF 25V	EJ47502510
C637		4822 124 21899	ELECT 4.7µF 25V	EJ47502510
C640		4822 124 21895	ELECT 0.22µF 50V	EJ22405010
C641		4822 124 21894	ELECT 10µF 16V	EJ10601610
C659		4822 124 21895	ELECT 0.22µF 50V	EJ22405010
C660		4822 124 90354	ELECT 100µF 16V	OA10701620
C663		4822 124 23056	ELECT 47µF 16V	EJ47601610
C665		4822 122 30043	CER. 0.01µF +80% -20% 50V	DK18103310
C701		4822 124 21899	ELECT 4.7µF 25V	EJ47502510
C702		4822 124 21899	ELECT 4.7µF 25V	EJ47502510
C705		5322 122 32072	CER. 33pF ±5% 50V	DD15330300
C706		5322 122 32072	CER. 33pF ±5% 50V	DD15330300
C707		4822 124 22571	ELECT 10µF 50V	OA10605020
C708		4822 124 22571	ELECT 10µF 50V	OA10605020
C711		4822 126 10797	CER. 10pF ±0.5% 500V	DD11100560
C712		4822 126 10797	CER. 10pF ±0.5% 500V	DD11100560
C713		4822 122 40103	CER. 5pF ±0.25% 50V	DD10050300
C714		4822 122 40103	CER. 5pF ±0.25% 50V	DD10050300
C717 ~ C720		5322 122 32265	CER. 100pF ±5% 500V	DD15101560
C721 ~ C724		4822 124 21895	ELECT 0.22µF 50V	EJ22405010
C725		4822 124 90354	ELECT 100µF 16V	OA10701620
C726		4822 124 22571	ELECT 10µF 50V	OA10605020
C801		4822 122 30043	CER. 0.01µF +80% -20% 50V	DK18103310
C802		4822 122 30043	CER. 0.01µF +80% -20% 50V	DK18103310
C805		4822 124 23052	ELECT 100µF 16V	EJ10701610
C806		4822 124 23057	ELECT 4.7µF 50V	EJ47505010
C807		4822 124 22571	ELECT 10µF 50V	OA10605020
C808		4822 124 22571	ELECT 10µF 50V	OA10605020
C809		4822 124 22571	ELECT 10µF 50V	OA10605020
▲C811		4822 126 12453	CER. 0.01µF +80% -20% 500V	DK18103560
▲C812		4822 126 12866	ELECT 4700µF 50V	EB47805040
▲C813		4822 126 12866	ELECT 4700µF 50V	EB47805040
C814		4822 122 30043	CER. 0.01µF +80% -20% 50V	DK18103310
C815		4822 122 30043	CER. 0.01µF +80% -20% 50V	DK18103310
C816		4822 124 80665	ELECT 10µF 50V	EJ10605010
			PV01-CAPACITOR (COMMON)	
C***			HIGH DIELECTRIC CONSTANT CERAMIC CAPACITOR, ±10% 50V : CB03, CF05~CF08, CM03, CM05, CM07, CM09, CM11, CM20, (CM21 [/02]), CS06, CV01~CV14, (CV23~CV24 [/02]), C608, C610, C629, C662, C703, C704, C709, C710	
C***			ELECTROLYTIC CAPACITOR, ±20% : C628, C727, C728, C803, C804, C817	

[VERS. : VERSION. U : U.S.A. F : Japan, K : Far East, /XX : Europe]

POS. NO.	VER. COLOR	PART NO. (For Europe)	DESCRIPTION	PART NO. (For U,K,F)
C***			PLASTIC FILM CAPACITOR, ±5% 50V : CM12~CM14, CM16, CM17, CM19, CS02, CS04, C603~C607, C609, C611, C613~C616, C620, C626, C627, C630~C635, C638, C639	
			PV01-RESISTORS	
⚠RN19		4822 053 11271	270 Ω ±5% 2W	GA05271020
⚠RN22		4822 053 11271	270 Ω ±5% 2W	GA05271020
R610		4822 111 30999	10M Ω ±5% 1/4W	GD05106140
⚠R613		4822 115 90167	100 Ω ±2% 1/4W, FUSE	NF02101140
⚠R634		4822 052 10101	100 Ω ±5% 1/6W	GG05101160
⚠R713		4822 050 26809	68 Ω ±5% 1/6W	GG05680160
⚠R714		4822 050 26809	68 Ω ±5% 1/6W	GG05680160
R719		4822 100 11386	1K Ω TRIM.	RA01020780
R720		4822 100 11386	1K Ω TRIM.	RA01020780
⚠R725 ~ ⚠R730		4822 050 26809	68 Ω ±5% 1/6W	GG05680160
⚠R731		4822 053 10221	220 Ω ±5% 1W	GA05221010
⚠R732		4822 053 10221	220 Ω ±5% 1W	GA05221010
⚠R733 ~ ⚠R736		4822 052 10109	10 Ω ±5% 1/6W	GG05100160
⚠R737		4822 116 82049	0.18 Ωx 2 3W	BZ10182010
⚠R738		4822 116 82049	0.18 Ωx 2 3W	BZ10182010
⚠R739		4822 050 26809	68 Ω ±5% 1/6W	GG05680160
⚠R740		4822 050 26809	68 Ω ±5% 1/6W	GG05680160
⚠R743		4822 053 11109	10 Ω ±5% 2W	GA05100020
⚠R744		4822 053 11109	10 Ω ±5% 2W	GA05100020
⚠R745		4822 053 10332	3.3K Ω ±5% 1W	GA05332010
⚠R747		4822 052 10221	220 Ω ±5% 1/6W	GG05221160
⚠R748		4822 052 10221	220 Ω ±5% 1/6W	GG05221160
⚠R801		4822 117 10158	1 Ω ±5% 1/4W	GG05010140
⚠R802		4822 117 10158	1 Ω ±5% 1/4W	GG05010140
⚠R808		4822 117 10002	2.2K Ω ±5% 1/2W	GG05222120
⚠R810		4822 053 11688	6.8 Ω ±5% 2W	GA05068020
R***			**PV01-RESISTORS (COMMON)** CARBON FILM FIXED RESISTOR, ±5% 1/6W : RB01~RB09, [RD01, RD02 (AV1040)], RD03, RD04, RF01~RF10, RG25, RG26, RM01~RM34, RM36, RM37, RN01~RN18, RN21, RN31, RN32, RS01~RS10, RV01~RV44, R601~R609, R611, R612, R614~R619, R633, R635, R638, R643~R647, R649~R651, R703~R712, R715~R718, R721,~R724, R746, R749, R804~R806	

POS. NO.	VER. COLOR	PART NO. (For Europe)	DESCRIPTION		PART NO. (For U,K,F)
			PV01-SEMICONDUCTORS		
DB01 ~ DB04		4822 130 33305	DIODE	1SS176, etc.	HD20002000
DD01		4822 130 82609	ZENER	MTZJ2.0B (AV1040)	HD30201000
DD02		4822 130 33759	ZENER	4.7V	HD30471000
DN01		4822 130 80837	DIODE	HSS81	HD20027010
DN02		4822 130 80837	DIODE	HSS81	HD20027010
DN03		4822 130 32508	DIODE	RL103E/DSF10C	HD20003000
DN05		4822 130 33305	DIODE	1SS176, etc.	HD20002000
DV01 ~ DV04		4822 130 33305	DIODE	1SS176, etc.	HD20002000
D602		4822 130 83142	ZENER	6.2V	HD30621000
D701		4822 130 80273	ZENER	8.2V	HD30821000
D702		4822 130 80322	ZENER	15V	HD31501000
D703 ~ D706		4822 130 33305	DIODE	1SS176, etc.	HD20002000
⚠D801 ~ ⚠D806		4822 130 32508	DIODE	RL103E/DSF10C	HD20003000
D807		4822 130 80838	ZENER	18V	HD31801000
⚠D808		4822 130 32508	DIODE	RL103E/DSF10C	HD20003000
⚠D810		4822 130 32508	DIODE	RL103E/DSF10C	HD20003000
⚠D811		4822 130 31007	DIODE	S4VB20	HE20015290
QD01		4822 209 30193	IC	LB1641 (AV1040)	HC10279030
QD02		4822 209 30193	IC	LB1641	HC10279030
QF01		4822 209 83631	IC	NJM4558D-D	HC10008090
QM01 ~ QM04		4822 209 83631	IC	NJM4558D-D	HC10008090
QM05		4822 209 72748	IC	LC7821	HC10228030
QN01		4822 130 43233	TRS.	2SC2240	HT322402A0
QN02		4822 130 43233	TRS.	2SC2240	HT322402A0
QN03		4822 130 42951	TRS.	2SA970	HT109702A0
QN04		4822 209 83312	IC	TA7317P	HC10042050
QN05		4822 209 60588	TRS. DIG	DTC114ES/UN4211	BA20001000
QS01		4822 209 83631	IC	NJM4558D-D	HC10008090
QS02		4822 130 61892	TRS.	2SD2144S (U, V)	HT421442A0
QS03		4822 130 42682	TRS. DIG.	DTA144ES/UN4113	BA10002000
QS04		4822 130 42594	TRS. DIG.	DTC144ES/UN4213	BA20002000
QV01		4822 209 72748	IC	LC7821	HC10228030
QV02		4822 130 42594	TRS. DIG.	DTC144ES/UN4213	BA20002000
QV03		4822 130 42682	TRS. DIG.	DTA144ES/UN4113	BA10002000
QV05		4822 130 61892	TRS.	2SD2144S (U, V)	HT421442A0
QV06		4822 130 61892	TRS.	2SD2144S (U, V)	HT421442A0

[VERS. : VERSION. U : U.S.A. F : Japan, K : Far East, /XX : Europe]

POS. NO.	VER. COLOR	PART NO. (For Europe)	DESCRIPTION	PART NO. (For U,K,F)
QV07		4822 130 42594	TRS. DIG. DTC144ES/UN4213	BA20002000
QV08		4822 130 42682	TRS. DIG. DTA144ES/UN4113	BA10002000
QV09		4822 130 61892	TRS. 2SD2144S (U, V)	HT421442A0
QV10		4822 130 61892	TRS. 2SD2144S (U, V)	HT421442A0
QV11		4822 130 42594	TRS. DIG. DTC144ES/UN4213	BA20002000
QV12		4822 130 42682	TRS. DIG. DTA144ES/UN4113	BA10002000
Q601		4822 209 32693	IC NJM2177L	HC10126090
Q603		4822 209 32695	IC NJU3711D	HC10128090
Q604		4822 209 73275	IC TC9214P	HC10209050
Q701		4822 130 42951	TRS. 2SA970 (GR, BL)	HT109702A0
Q702		4822 130 42951	TRS. 2SA970 (GR, BL)	HT109702A0
Q703		4822 130 43233	TRS. 2SC2240	HT322402A0
Q704		4822 130 43233	TRS. 2SC2240	HT322402A0
▲Q705		4822 130 60117	TRS. 2SC3419 (Y)	HT334191Y0
▲Q706		4822 130 60117	TRS. 2SC3419 (Y)	HT334191Y0
▲Q707		4822 130 62335	TRS. 2SD2033 (E)	HT420331E0
▲Q708		4822 130 62335	TRS. 2SD2033 (E)	HT420331E0
▲Q709		4822 130 62334	TRS. 2SD1353 (E)	HT213531E0
▲Q710		4822 130 62334	TRS. 2SD1353 (E)	HT213531E0
▲Q711		4822 130 60697	TRS. 2SC3180N	HT331802A0
▲Q712		4822 130 60697	TRS. 2SC3180N	HT331802A0
▲Q713		4822 130 60694	TRS. 2SA1263N	HT112632A0
▲Q714		4822 130 60694	TRS. 2SA1263N	HT112632A0
Q717		4822 209 83732	IC AN7062	HC10066020
▲Q801		4822 209 33819	IC µPC24M15HF	HC3651506F
▲Q802		4822 209 32514	IC L78MR06	HC10263030
▲Q804		4822 209 31864	IC NJM7915FA	HC3991509F
			PV01-MISCELLANEOUS	
JS01		4822 290 81688	TERMINAL, 2P RCA	YT02021260
JV01		4822 267 31451	TERMINAL, 8P RCA	YT02080110
JV02		4822 267 31451	TERMINAL, 8P RCA	YT02080110
JV04		4822 267 41009	TERMINAL, 2P RCA	YT02020890
J604		4822 290 81687	TERMINAL, 2P RCA	YT02021040
LN01		4822 280 70354	RELAY, VB24MBU	LY20240310
			PV51-SPK TERMINAL SURROUND CIRCUIT BOARD	
			PV51-CAPACITORS	
C729	/02	4822 122 30043	CER. 0.01µF +80% -20% 50V	DK18103310
C730	/02	4822 122 30043	CER. 0.01µF +80% -20% 50V	DK18103310
			PV51-MISCELLANEOUS	
J751		4822 290 81646	TERMINAL, 4P SPK	YT01040640

POS. NO.	VER. COLOR	PART NO. (For Europe)	DESCRIPTION	PART NO. (For U,K,F)
			PV71-SPK TERMINAL CENTER CIRCUIT BOARD	
			PV71-CAPACITORS	
C733	/02	4822 122 30043	CER. 0.01µF +80% -20% 50V	DK18103310
C734	/02	4822 122 30043	CER. 0.01µF +80% -20% 50V	DK18103310
			PV71-MISCELLANEOUS	
J771		4822 290 81686	TERMINAL, 2P SPK	YT01020230

NOTE ON SAFETY:
Symbol ▲ Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol ▲. Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.